ESTABLISHED IN 1872

PAPER TRADE JOURNAL

With Which Is Combined

Vol. XC, No. 21 — PAPER — Thursday, May 22, 1930

For Mill To Make Paper For U. S. Securities

Mr. Wood of Indiana Who Introduces Bill in House States That It Is An Effort To Break What He Calls "A Monopoly" Held By One Manufacturing Concern That Has Furnished Paper For the United States For More Than Fifty Years — Bill Has Been Referred to House Committee on Expenditures in the Executive Department

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., May 21, 1930.—Representative Will Wood of Indiana has introduced a bill in the House "to provide for the construction of a mill to manufacture distinctive paper for United States securities." While bills without number have been introduced in Congress during the past years for paper mills for the government this is the first time that a bill has been introduced dealing with distinctive paper alone.

Text of the Bill

The bill has been referred to the House Committee on Expenditures in the Executive Departments. It is as follows: That the Secretary of the Treasury be, and he is hereby, authorized and directed to prepare and submit to the Congress at the beginning of its next regular session plans and specifications for the construction of a fireproof paper mill and estimates of the cost of such mill, including necessary machinery, motors, accessories, and so forth, of sufficient capacity to manufacture all distinctive paper required for the printing of United States securities: *Provided,* That not to exceed $10,000 of any amounts appropriated for the procurement of distinctive paper for United States securities for the fiscal years 1930 and 1931 shall be available for the expenses incident to the preparation of said plans, specifications, and estimates, including necessary personal services in the District of Columbia and elsewhere: *Provided further,* That the said Secretary shall select and report to the Congress a suitable Government-owned site in the District of Columbia, preferably adjacent to the Bureau of Engraving and Printing, for the location of the proposed paper mill.

SEC. 2. An appropriation of not to exceed $1,000,000 for the construction of such a mill, including necessary machinery, motors, accessories, and so forth, and for the purchase of a suitable site if no suitable Government-owned site is found to be available, is hereby authorized.

Statement by Mr. Wood

Mr. Wood stated at the time he introduced the bill that it is in an effort to break what he calls a "monopoly" held by one manufacturing concern that has furnished paper for the United States for more than 50 years. He claims that such a mill as he suggests would pay for itself in four years.

This action was taken by Chairman Wood after he had received a report on which the Bureau of Efficiency has been working for five years with the co-operation of the Bureau of Engraving and Printing, the Bureau of Standards, the Secret Service and private manufacturers. This report shows that the contractor supplying the "distinctive" paper has not complied with the wishes of the Government, that he submits bids which exact penalties of from $112,000 to $144,000 if any other manufacturer is given any of the 1,200 tons required annually by the Government, that a saving is possible of from $66,000 to $89,000 in express charges, and that under the system of competitive bidding it is impossible for the Government to have any secret processes for the manufacture of distinctive paper.

Change for Improvement

Chairman Wood emphasizes that tests made both by the Bureau of Standards and by a private manufacturer prove that "no difficulty should be encountered in producing a currency paper from three to five times as strong as the paper the contractor has been furnishing."

Emphasizing that he is entirely unsympathetic with any proposal to put the Government into competition with private industry, Mr. Wood pointed out that "the paper for our currency is entirely different and is not used commercially. In fact," he stressed, "the manufacture of paper having any of the distinctive features prescribed in our currency is forbidden by a statute which carries heavy penalties for its manufacture for any other person or institution than the Federal Government."

Explains Findings of Efficiency

In connection with the findings of the Bureau of Efficiency on this subject Mr. Wood explained in effect "That when invitations for bids were issued recently for paper for the fiscal year ending June 30, 1931, the Treasury Department requested bids on the same basis as those for 1930, but specifically reserved the right to divide the award between the two lowest bidders. The contractor who has had this contract for more than half a century submitted a bid of 44 cents a pound if permitted to furnish the entire requirements of the Treasury; of 49 cents a pound if permitted to furnish the entire requirements less 200 tons and of 51½ cents a pound if permitted to furnish the entire requirements less 400 tons. The second and only other bidder was the manufacturer who is sharing the contract for 1930. He offered to furnish either 200 or 400 tons at a flat price of 47 cents a pound.

"Obviously Penalty Bid"

"The bid of 44 cents a pound is obviously a penalty bid designed to kill competition," emphasized Chairman Wood, "and if ac-

(Continued on Page 66)

Big Canadian News Print Merger Announced

Consolidation of St. Lawrence Paper Mills, Brompton Pulp & Paper Co., and Lake St. John Power & Paper Co. Approved by Directors of All Three Organizations—Holding Company to be Created to Acquire Control Through Common Stock Ownership.

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., May 19, 1930.—The long-anticipated consolidation plan to merge the St. Lawrence Paper Mills, the Brompton Pulp and Paper Company, and the Lake St. John Power and Paper Company has now been officially announced. It has been approved by the directors of all three companies and is virtually assured of being carried through. A new holding company, the St. Lawrence Corporation, Ltd., is to be created to acquire control, through common stock ownership of the three companies. Ernest Rossiter, for some years the chief executive of St. Lawrence Paper Mills, will become the operating head of the consolidation, and will be supported in each division by the present management.

Combined Daily Production of 1000 Tons

The three companies have a combined daily production of approximately 1,000 tons of news print, 100 tons of kraft paper, and 70 tons of boxboard. J. A. Bothwell, president of the Brompton Company, in a letter to the shareholders, says: "The three companies, by reason of the location of their mills and timber limits, readily lend themselves to such co-ordination of activities that substantial improvement in operating efficiency and costs can be effected. Moreover, by such consolidation future expansion of the unified enterprises can be made on a much sounder and more profitable basis than by the companies individually. A plan has now been formulated and after very careful consideration has been approved by the Boards of Directors of all these companies.

"Based upon the consolidated showing, earnings of $1,028,532 would be applicable to the $600,000 Dividend on Class "A" Convertible Preferred Stock of St. Lawrence Corporation, Ltd., after providing for adequate depreciation, all interest charges and preferred dividends of St. Lawrence Paper Mills Company, Ltd. It should be remembered that these results were obtained with these three companies operating as independent units very considerably below capacity, by reason of co-operation with the Newsprint Institute interested in stabilization of the industry through prorating of tonnage among mills. It is confidently believed that substantial savings should result from unified operations."

The New Holding Company

St. Lawrence Corporation, the new holding company, will have outstanding 300,000 shares of Class A $2 cumulative convertible preferred stock and 585,000 shares of common stock of no par value, and the basis of exchange will be as follows:

For each share of common stock of St. Lawrence Paper Mills Company, Ltd., one share of common stock of St. Lawrence Corporation, Ltd.

For each share of common stock Brompton Pulp and Paper Company, Ltd., one share of class "A" $2 cumulative convertible preferred stock of St. Lawrence Corporation, Ltd.

For each share of common stock of Lake St. John Power and Paper Company, Ltd., 7-10 of one share of the common stock of St. Lawrence Corporation, Ltd.

Combined Earnings

Following is the statement of combined earnings of the St. Lawrence Corporation and constituent companies, for the year ended December 31, 1929, as prepared from the earnings statements of the constituent companies, and showing substantially the earnings for the year:

xOperating profit	$3,206,463
Depreciation	802,792
Balance	2,403,671
Interest	520,000
Balance	1,883,671
aPfd. dividends	885,138
Balance	1,028,533
bPfd. dividends	600,000
cBalance	428,532

x—After provision for income tax.

a—Preferred stock of St. Lawrence Paper and Brompton Paper.

b—Dividend on Class A $2 preferred stock of St. Lawrence Corporation, Ltd.

c—Applicable to common stock of St. Lawrence Corporation, Ltd.

Following is the working capital position after completion of consolidation:

Current assets	$10,490,390
Current liabilities	4,618,937
Net working capital	5,871,453

Following is the pro forma consolidated balance sheet of St. Lawrence Corporation, and constituent companies, as at December 31, 1929, as based on the audited balance sheet of the constituent companies at that date:

ASSETS

Current assets	$10,490,390
Interest in subsidiaries	472,152
Property, etc.	56,564,148
Total assets	68,128,600

LIABILITIES

Current liabilities	$4,618,938
xFunded debt	8,000,000
St. Lawrence preferred	14,225,850
Brompton preferred	1,000
Depreciation and depletion reserve	6,778,937
Preferred stock	15,000,000
aCapital and capital surplus	17,372,226
bEarned surplus	2,131,649
Total liabilities	$68,128,600

x—Bonds and debentures of Lake St. John Power and Paper Co., Ltd.

a—Applicable to 585,000 common shares, without nominal or par value to be outstanding.

b—Of constituent companies.

Quebec Can Produce Own Forest Experts

The Hon. Honore Mercier, Minister of Lands and Forests for the Province of Quebec, in an address at Berthierville, Que., where the great forest nurseries of the Quebec Government are situated, told of the great strides in technical education in forestry matters here in recent years, and added:

"We have no need now to send young men overseas. They can get their education here in their own province. Thanks to Sir

Lomer Gouin we have sons of the province who can direct the forestry enterprises with all the intensity necessary. If there is anything which I deplore it is to see big industries, for which I have the greatest respect and which I am ready to help, not employing the young men whom we have formed in anything like the number which should prevail but using as heads of their development men who are not natives of this province. It seems to me that this situation should change. If it be true that there has been reason for reproaching us with not having the men to direct these industries, it can be said that today the reason had disappeared."

News Print Freight Rates Inquiry

During the past week the Board of Railway Commissioners in Ottawa has been holding hearings in regard to the new freight rates on news print paper shipped to the United States proposed by the Canadian railways. A. Walker, assistant general freight agent for the Canadian Pacific Railway, told the Board that if the railways failed to reach an agreement over the division of the freight charges all existing through rates on news print shipped from Canada to the southern States would be cancelled, and the standard rates would prevail.

Present through rates on news print shipped to the southern territory were quite low, the witness stated, and in addition to this the railway companies of the southern States demanded such a large share of the freight returns that the Canadian railroads were handling this freight at a loss. Negotiations were being carried on with United States roads in an attempt to reach an agreement satisfactory to the Canadian railways, but so far had been without success.

Cross-examined by G. H. Montgomery, K.C., Mr. Walker said the amount of Canadian news print shipped to the south was only a small part of the output of Canadian mills, and was distributed over widely scattered points. For this reason the railways felt they should no longer be called upon to handle this freight at a loss.

L. J. Knowles, assistant freight traffic manager for the Canadian National Railways, said the proposed higher rates would not weaken the competitive position of Canadian news print mills as compared with United States mills. He based his opinion on the fact that at a recent hearing before the Interstate Commerce Commission he had heard United States news print producers ask for lower freight rates on the ground that they could not meet the competition of Canadian mills unless they received preferential rates. Witnesses for the United States mills had said owing to cheaper water power, a better supply of wood and better labor conditions in Canada, Canadian mills could produce news print more cheaply than they could.

He further stated that freight rates on news print from Canadian mills to points in the United States are lower than corresponding rates in Canada.

As an example of what were termed the anomalies of the present system, Mr. Knowles stated the rate on news print from Ottawa to Pittsburgh, shipped over the suspension bridge at Niagara Falls, was lower than the rate from Ottawa to Niagara Falls. As soon as a shipment crossed the border the international rates became active and the return was lower from the longer haul than from the shorter. The rate from Ottawa to Windsor, he stated, was only half a cent lower than from Ottawa to Chicago, although the distance of the latter point was 500 miles greater.

Taking the case of New York city, Mr. Knowles said the rate from Grand'Mere, Que., a distance of 570 miles, was 34 cents per hundred-weight. From the nearest paper mill to New York in the United States at Corinth, the rate was 25 cents per hundred-weight although the distance was only 197 miles. This means that the difference in rate from the Canadian mill was only 9 cents, although the difference in distance was 373 miles.

"This illustrates how far Canadian and American carriers have gone in joining together to give Canadian mills an opportunity of getting into New York City," said Mr. Knowles. "I think we have gone too far because I believe the mills can pay a higher rate and still market their product in New York."

After occupying an entire week, the hearing has been adjourned until June 16. The railway still have witnesses to call in connection with operating costs, and the news print interests opposing the increases have considerable evidence to present.

Both Canadian and American railroads are interested in the higher rates. Practically all the large newspapers of the United States are represented by counsel at the hearing.

Price Bros. Prepare for Years of Over Production

At the annual meeting of Price Bros. & Co., at Quebec, Lt.-Col. John H. Price, the president, announced that the directors, feeling that it would be some years before the supply and demand of news print paper would approach an equality, had adopted a policy of diversification in wood products. "We are already putting the wood waste of our lumber establishments to commercial use," he said, "and we have completed the construction of a mill at Donnacona, where we are manufacturing a high grade insulating board. With the assistance of our Research Department we are looking forward to finding further profitable outlets for the more complete consumption of the trees cut in our forests."

The annual report indicated that the company did surprisingly well during the fiscal year to February 28, especially under the difficult conditions that have prevailed in the news print industry. The president further stated:

"I feel we have some justification for congratulating ourselves upon the condition of our balance sheet. The liquid position is most satisfactory, and the physical condition of your company's properties has continued to be well maintained out of revenue.

"From the lumber establishments we produced and sold approximately seventy million feet, as well as a complement of ties, shingles and lath at a satisfactory profit.

"The additions to our Riverbend Mill are now complete, giving us a capacity there of four hundred and eighty tons of news print paper a day.

"We have completed the purchase of the controlling interest in Donnacona Paper Company, Ltd., and if we add the capacity of this company's news print mill to that of our own, we have a total daily capacity of twelve hundred and fifty tons."

To Dismantle Nova Scotia Pulp Mill

The Digby County Power Board in Nova Scotia has called for tenders for the removal of the plant of the pulp mill once operated by the Clyde and Sissiboo Pulp Company, at Weymouth, N. S.

Clyde and Sissiboo Pulp Company officially passed out of corporate existence early in 1929, when Mersey Paper Company took over the organization from the hands of the receiver at a price of approximately $200,000. Proceeds, after allowance has been made for various expenses, were distributed among holders of the 6½ per cent bonds at the rate of approximately 38 cents on the dollar.

The property of Clyde and Sissiboo comprised two ground wood mills at Fort Clyde and Weymouth, having an annual capacity of 13,000 tons of ground pulp; 31,646 acres of freehold land and 44,936 acres of leasehold timber limits, and water powers on the Clyde and Sissiboo rivers.

To Improve Color of News Print

The Powell River Company, Ltd., of Powell River, B. C., has made a second grant of $5,000 to the University of British Columbia for the continuance of research work to improve the color of news print.

News print mills in British Columbia have been faced with an obstacle in a certain discoloration of their product and it has been the research task of Professor Wilfred Sadler, head of the department of dairying in the agricultural faculty, and Dr. Blythe Eagles, his assistant, to discover a practical remedy.

Activities of Fox River Valley Paper Mills

Wisconsin Railroad Commission to Determine Finally Which Company Shall Have Exclusive Power Rights At Combined Locks at Hearing To Be Held May 20—Affairs of Wisconsin Carton Co., of Stevens Point, Ordered To Be Liquidated

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., May 19, 1930.—Liquidation of the affairs of the Wisconsin Carton Company, of Stevens Point, Wis., has been ordered by the circuit court of Portage County. This concern was organized about a year ago to manufacture dairy cartons and other multi-color products and recently was placed in receivership.

Sealed bids are to be received up to May 31, 1930, covering equities in machinery and tools, office equipment, raw material and partly manufactured products. The assets will be sold in whole or in part, subject to approval of the court. L. P. Moen is receiver for the company, and Mark Catlin, of Appelton, Wis., and J. R. Pfiffner, of Stevens Point, Wis., are attorneys for the receiver.

Combined Locks Power Rights Hearing

The Combined Locks Paper Company, Appleton, Wis., has been made a party to a case now before the Wisconsin Railroad Commission concerning the sale of power commercially to the village of Combined Locks, where the company's principal mill is located. The commission is trying to determine who should supply power to the village, and is including in the hearing the Wisconsin-Michigan Power Company, the municipal electric utility of Kaukauna, Wis., and the South Shore Utility Company. The Combined Locks Paper Company, the commission says, has been operating as a public utility by supplying power to the village and a hearing will be held on May 20 so the commission will be able to determine finally which company shall have exclusive power rights in the future.

Wisconsin Mills Oppose Higher Freight Rates

Wisconsin paper manufacturers believe they will be subject to increased freight rates on news print if the Canadian railways and the Eastern United States lines are successful in their attempts to obtain increases. Applications are now before the board of railway commissioners of Canada, and the Interstate Commerce Commission of the United States at the present time. The railways in the middle west are watching the proceedings and are ready to demand higher rates if the other cases go through. Railways of Wisconsin, Michigan and Minnesota are represented at the hearings by E. W. Soergel, of Chicago.

DuPont Aids Paper Chemistry Institute

E. I. DuPont de Nemours & Co., of Wilmington, Del., has made a gift of $5,000 to the Institute of Paper Chemistry, of Lawrence College, Appleton, Wis., according to announcement of Dr. Henry Merritt Wriston, president. In making the gift, E. G. Robinson, general manager of the dyestuffs department, said, "I am sure that you have taken a great forward step for the benefit of the industry."

Harry E. Lewis, newly appointed professor of organic chemistry in the institute, will assume his duties in June instead of September. He comes to Lawrence College from Ohio Wesleyan University, where he has been head of the chemistry department. The institute will continue with important additions when it opens in September, increasing both the faculty and the equipment.

New Allan Paper Stock Building Nearly Ready

Construction of the new building for the Allan Waste Paper Company, Menasha, Wis., will be completed in about thirty days. An inspection of the work was made last week by Herman J. Finder, of Milwaukee, secretary and treasurer, and Edward Schwartz, auditor. Fred Piette, of Appleton, Wis., is the contractor in charge.

New England Paper Merchants Meet

SPRINGFIELD, Mass., May 19, 1930.—With about 75 present the spring convention of the New England Paper Merchants Association at the Hotel Kimball, this city, May 13, was highly successful. The meeting was opened at the dinner by Jack Whitney, of Meek & Whitney, Inc., a local firm, who introduced Henry Martens, president of the board of aldermen. Mr. Martens extended the official greeting of Springfield in the absence of the mayor, who was obliged to be out of town.

The meeting was then taken over by Arthur E. Ham, president of the New England Paper Merchants Association, who presided during the balance of the evening. Floyd H. Blackman, of D. F. Munroe, Boston, Mass., vice president in charge of the Wrapping Paper Division, and William H. Rourke, of the Rourke-Eno Paper Company, Inc., Hartford, Conn., vice president in charge of the Fine Paper Division, made remarks. Arthur W. Blackman, of D. F. Munroe Company, vice president of the National Paper Trade Association, gave an address, speaking on the importance of having a uniform system of cost accounting for paper merchants.

A. H. Chamberlain, assistant secretary of the National Paper Trade Association, addressed the meeting also on the uniform method of cost accounting for paper merchants all over the country and the educational campaign of the National Association to have this uniform system adopted by all.

The meeting then divided into two sections. A. H. Chamberlain addressed the Fine Paper Division on the credit situation. The members of the Wrapping Paper Division discussed subjects of special interest to that division.

On May 14 there was an outing for all at the Springfield Country Club, with various sports on the program. Prizes were awarded in the golf competition. It is said that nobody else seemed to have a chance with W. N. Stetson, Jr., playing. Luncheon was served in the grill-room of the club-house. Sports continued in the afternoon.

All present enjoyed very much both the evening and the day following and appreciated the time and thought given to the arrangements by Jack Whitney and his local committee.

A New Record for Reforestation

ALBANY, N. Y., May 19, 1930.—A new record for reforestation activities in this state was made by conservation employees last week with the planting of trees at the rate of nearly 250 acres a day. In Madison county a large crew of men began planting 150,000 trees a day covering approximately 200 acres and they will continue until 1,340,000 trees are laid out. In Otsego county trees are being planted at the rate of 50,000 a day on a large tract of land and the work will continue until 1,100,000 trees are set out. In Montgomery county 410,000 trees were planted during the latter part of April and it is planned to continue the extensive program mapped out.

No more orders for trees for spring planting are being taken at the state nurseries and no shipments will be made after this week. By next week all of the land acquired for state reforestation areas under the Hewitt law, for which title has been approved, will be planted. The great increase in planting on reforestation sites and in the planting of county forests whereby the state furnishes aid will probably carry total plantings this year to about 40,000 trees which is conceded to be much larger than any previous year in the history of the state.

Complaints are costly... ...end them

Bird Centrifiners make paper that is virtually free from specks—paper that pleases old customers—paper that makes new customers.

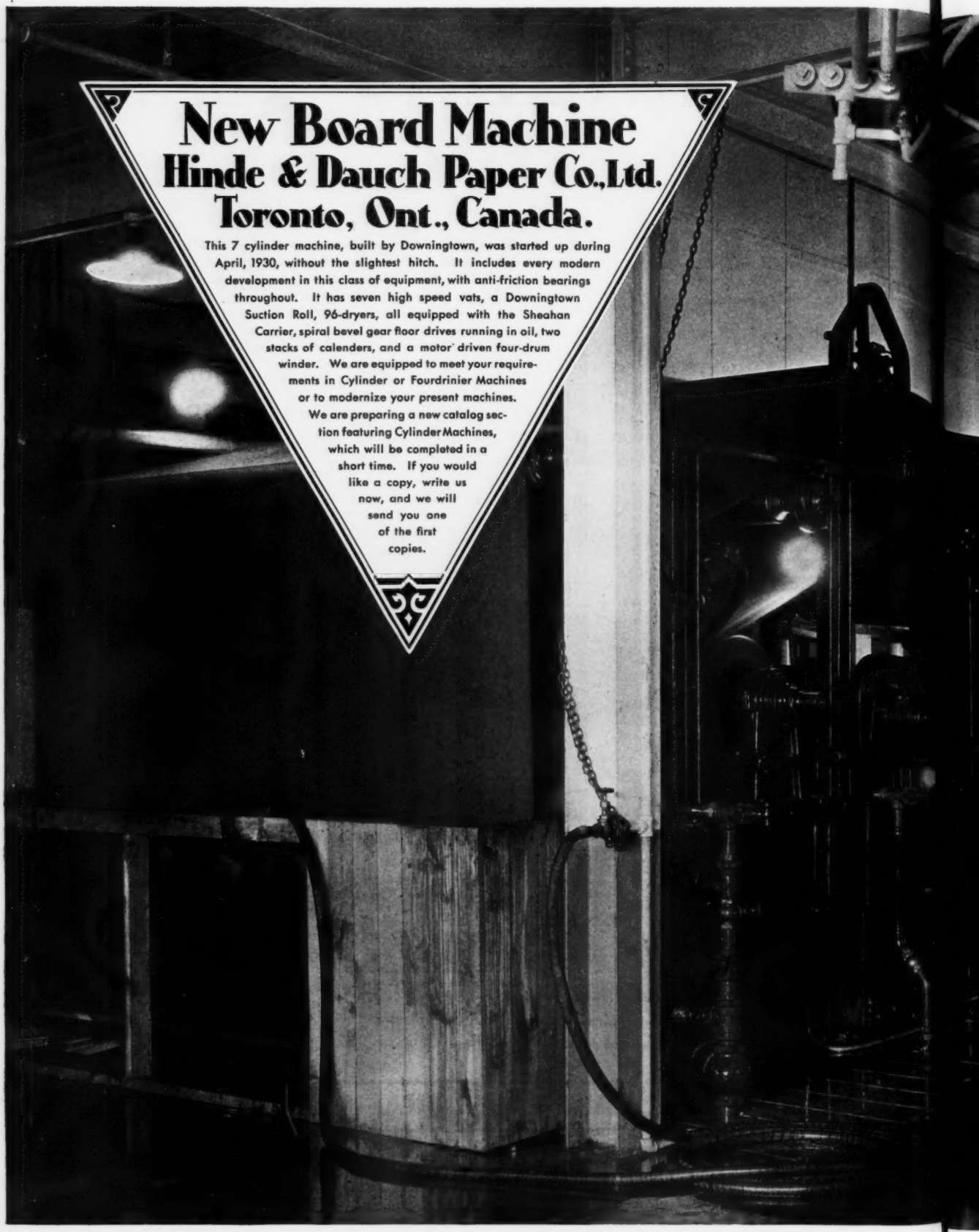
Let us show you how Centrifiner*-equipped mills have stopped the complaints that spoil profits and strain goodwill. You should have the facts. Write today for the whole story.

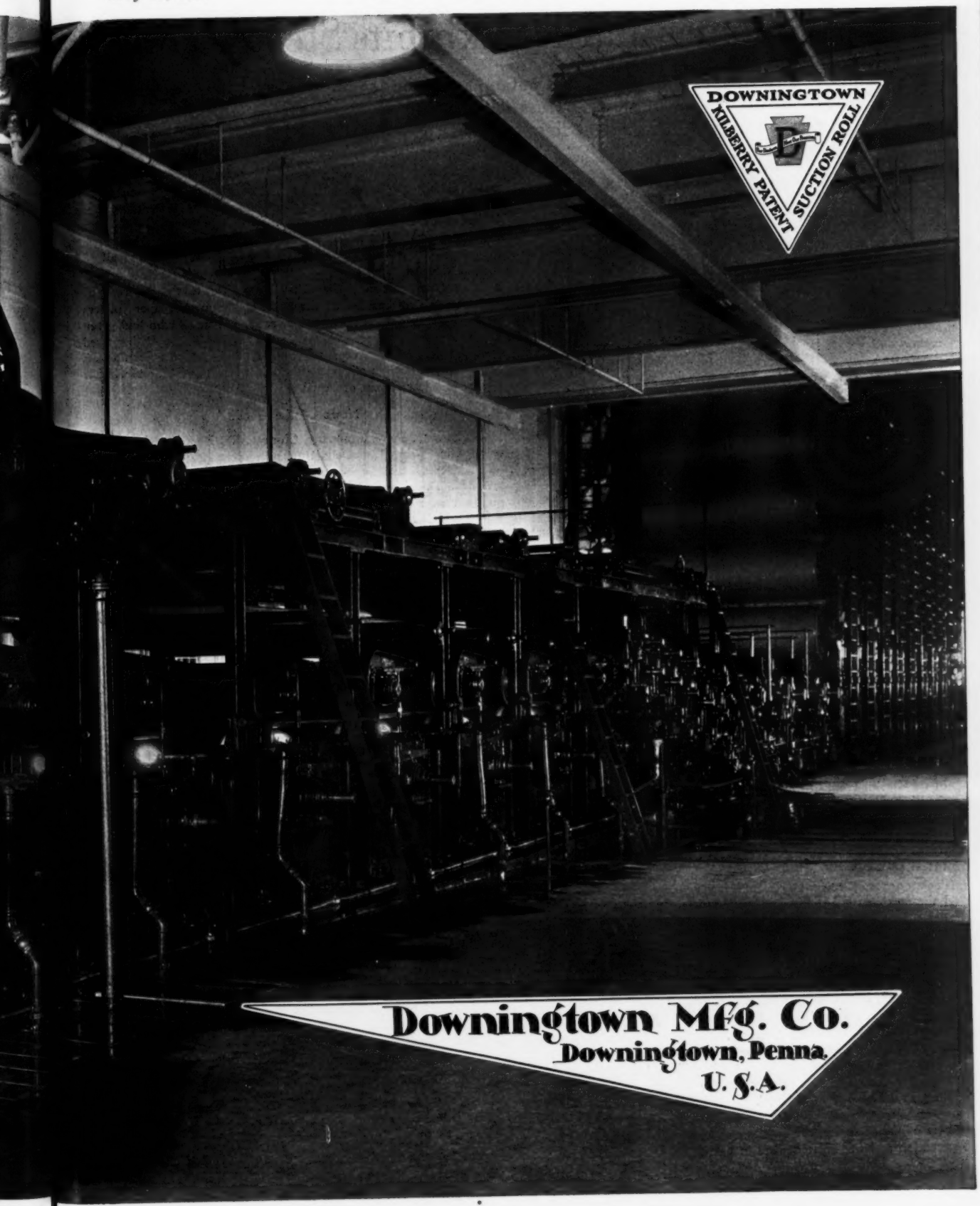
BIRD MACHINE COMPANY
SOUTH WALPOLE MASSACHUSETTS

*Manufactured under license from the Centrifugal Engineering & Patents Corporation, owners of the Erkensator patents.

NOW YOU CAN MAKE PAPER THAT IS REALLY CLEAN . . .

USE BIRD CENTRIFINERS


New Board Machine
Hinde & Dauch Paper Co., Ltd.
Toronto, Ont., Canada.
This 7 cylinder machine, built by Downingtown, was started up during April, 1930, without the slightest hitch. It includes every modern development in this class of equipment, with anti-friction bearings throughout. It has seven high speed vats, a Downingtown Suction Roll, 96-dryers, all equipped with the Sheahan Carrier, spiral bevel gear floor drives running in oil, two stacks of calenders, and a motor driven four-drum winder. We are equipped to meet your requirements in Cylinder or Fourdrinier Machines or to modernize your present machines.
We are preparing a new catalog section featuring Cylinder Machines, which will be completed in a short time. If you would like a copy, write us now, and we will send you one of the first copies.


DOWNINGTON
KILBERRY PATENT SUCTION ROLL
Downingtown Mfg. Co.
Downingtown, Penna.
U. S. A.

Chicago Paper Market Exhibits Steady Trend

Distributors of News Print Paper Report Demand Speeding Up Slightly—Paper Board Market Shows Signs of Improvement Despite Unsatisfactory Price Situation — Ground Wood Specialties In Excellent Request, With Offerings Limited

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., May 19, 1930.—The Chicago paper market does not suffer in comparison with other markets in this section. The paper groups are concentrating their efforts only on 1930, without thought of a big 1929, and, as a result, show a strength that is wanting in many another market. More retail buying is noted in many of the lines. This is having its effect, particularly in the news print field, where representatives say that business has speeded up slightly. The board market still works against the unsatisfactory price situation and, despite this handicap, is showing some progress along the right lines. The book section turned rather dull during the past week with the Chicago market not especially active, in keeping with the reported spotty character of the market. Prices are firm, however.

Ground woods are stronger and the greatest problem here, according to Chicago representatives, is getting a sufficient supply to take care of demand. Rains in the Northern ground wood pulp section have assisted materially in the last two weeks. Wrapping paper is more active with retail buying moving it along. Jobbers in the Chicago market note a marked improvement though there are several inconsistencies in the prices that continue to upset a normal keel. Fine papers have slowed up somewhat but prices continue firm and the market for the near future shows some genuine signs of promise.

Paper Salesmen's Chaplain Made Bishop

The Rev. George Craig Stewart, chaplain of the Salesmen's Association of the Paper Industry, all round good fellow and friend, was elected Bishop Coadjutor of the Episcopal Diocese of Chicago at a special convention recently called in Chicago. Dr. Stewart is well known to paper salesmen and his annual talk at the Chicago divisional meetings is always a big event on the year's program. He is receiving the congratulations of his friends and is assured of the well wishes of the paper industry. Dr. Stewart polled 97 out of the 108 votes cast at the convention.

Plans Big News Print Shipments

The *Chicago Tribune* plans to transport more than 70,000 tons of news print from Canada to Chicago during the summer months, thereby pointing the way to a revival of Lake shipping. The S.S. *Lawrendoc,* of Fort William, Ontario, completed the unloading of more than 1,500 tons early in the week while a total of 60,000 tons will move this summer from Canadian points and 10,000 tons from North Tonawanda, N. Y. The move has been declared a step toward reestablishing Chicago's status as a vital Lake port in the handling of merchandiseing freight. About 1,000 linear feet of dock frontage along the north bank of the Chicago River is already under lease by the *Chicago Tribune.*

Chicago Paper Association's Plans

According to D. F. Peck, president of the Chicago Paper Association, that organization plans a gala special event on the evening of June 2 at which time Frank Floyd, secretary of the National Paper Trade Association, Arthur Blackman, and other guests, will be on hand, some to address the audience and others to get into the spirit of the meeting. Mr. Peck said that all arrangements were made for the June program at the Tuesday evening, May 13, meeting at the Bismarck Hotel.

Aside from regular business routine at the last meeting, members of the association had quite a discussion concerning the kraft situation and the kraft market in particular. Commenting on the discussion Mr. Peck said, "Some of the members came out openly and said that they were getting kraft, receiving a 5 per cent commission plus the 2 per cent, thirty days, arrangement. Other jobbers were equally as frank in stating that they were receiving a 3 per cent commission and the 2 per cent discount. Of course, they wouldn't say who the mills were who were providing all of this. I don't care who they are, if they can do business like that and on that scale a jobber just about has to get interested." Along with a discussion of the kraft situation the paper jobbers also went over the credit situation, rewarded those who had given much time in an effort to investigate the situation, and discussed business generally. According to Mr. Peck business conditions have improved materially since the last meeting of the association during the latter part of April.

News of the Trade

The Swigart Paper Company, Chicago, has issued to the trade a folder sheet printed on Della Rabbia, modern in design and make-up and replete with some excellent copy that puts over the sales message. The copy, calling reference to the paper, also drops a good message about the importance of color in spring selling. The copy itself is "Springy" with one phrase in particular getting the call—"Only one spring a year—make the most of it."

The Chicago Division of the Salesmen's Association of the Paper Industry trots out its first golf clubs of the year on Thursday, May 22, when the first of the monthly golf tournaments gets under way. The day's play will be over the Elmgate Country Club course. Lots of fireworks will usher in this first of the monthly events that are so deservedly popular.

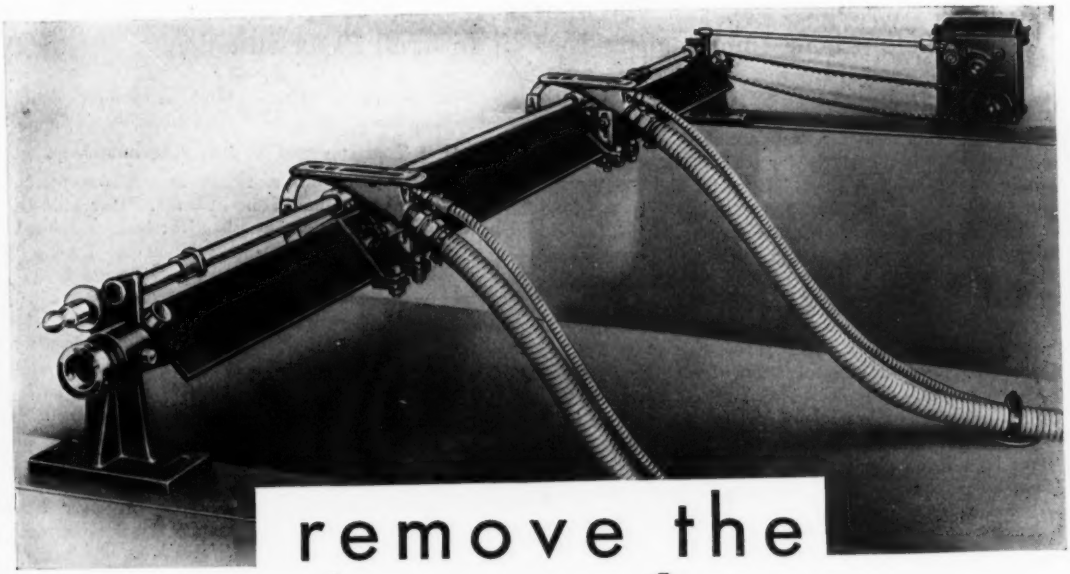
The latest issue of "Rags," published by the Rag Content Paper Manufacturers, made its appearance in Chicago this week. With brevity in copy as its most dominating characteristic, the message sent out made quite an impression. Here it is—"Selling courage begets buying courage. Modern American business is the result of two forces: courageous selling and courageous buying. One begets the other. The over cautious seller, frightened off the field, leaves the market to the man of courage. While the over cautious seller sends out timid literature or none, or worries its cost down to the point of impotence, the courageous seller gets the glow of health and self-assurance into each mailing piece. He is confident that selling courage will beget buying courage. Your words, your pictures, their arrangement and color, the quality and character of paper, supply the power behind your presentation. Use the sort of mailing pieces, stationery, advertising, that bespeak your own confidence in the thing you offer." Which, taking it all in all, is worth the attention of the entire paper industry.

Finch, Pruyn & Co. Close Forest Preserve

[FROM OUR REGULAR CORRESPONDENT]

GLENS FALLS, N. Y., May 19, 1930.—It was announced this week by officials of Finch, Pruyn & Co. that the permits issued for the use of its huge forest preserve in Essex and Hamilton counties had been temporarily suspended in line with the proclamation of state government officials closing tracts north of here to sportsmen until the danger of fire is eliminated. Each year the company issues hundreds of these permits which allows the use of the property throughout the season. Fire wardens employed by the company have been instructed to allow no persons upon the preserve although it was learned that the permits will again become effective as soon as rains have removed the fire hazard.

VICKERY FELT CONDITIONERS



remove the dirt as fast as it forms..

Always soft and open, felts that are operated with Vickery Felt Conditioners remove the maximum amount of water every minute they are on the machine. There is no let-up in their efficiency.

Are your felts like that? Let us show you what Vickery Felt Conditioners will do in your mill. Try one, at our expense.

BIRD MACHINERY

BIRD MACHINE COMPANY

SOUTH WALPOLE ◆ MASSACHUSETTS

4068

Demand for Paper Broadening in Philadelphia

Fine Paper Market Fairly Active, With Unfinished Grades and Coated Papers In Particularly Good Request—Wrapping Paper Moving In Greater Volume, At Steadier Prices Than of Late—Some Improvement Noticed In Kraft Paper Situation

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., May 19, 1930.—Creeping along slowly in the broader paper market of the week there was continued demand for small lot shipments needed in the day to day trading that seems to govern the local industry. While business has expanded somewhat, it is more in the nature of a slow improvement than a spurt of buying, with little or no stocking of consequence. Those few concerns that buy under contract have been fairly well signed up for the season and for from two to three months ahead in the early summer weeks. This is true of the consumers of bulk quantities of fine papers, such as the unfinished grades and some of the nationally prominent grades of coated papers that have been purchased at attractive levels this season but without serious inroads on prices generally.

Demand for wrapping paper has improved slowly. The trend of prices has been more steady. Krafts are slightly firmer, as distributors have been banding together in the determination to hold off stocking orders until convinced that prices are stabilized or do not seek lower levels. Mill representatives report a fair volume of business but no heavy stocking by distributors and the efforts of the salesmen have very little results in the anticipation of orders for the summer months. There was a growing demand for hot weather supplies as the mercury soared to record spring time heights. A spurt in sanitary paper goods, drinking cups, soda fountain and ice cream supplies, indicated preparation for the torrid temperature that soon will be at hand.

Paper Association Discusses Uniform Cost Accounting

When the Philadelphia Paper Trade Association, Fine Paper Division, met last Wednesday at the Down Town Club in the Public Ledger Building the main object of the gathering was for the purpose of discussing a program for inquiry into the cost accounting percentages of the various dealers with a view to providing a uniform cost percentage for the conduct of business. The meeting was informal and a round table discussion followed luncheon. The result of the gathering was the arrangement for a questionnaire which will be sent to the dealers to be filled in with percentage costs of conducting their business on various classifications for comparative analysis with a view to establishing a uniform percentage on which the local trade may base its costs. The questionnaire refers to percentage costs of such routines as warehousing, delivery, office, selling, and advertising expenses. When completed the questionnaire is to be returned to the committee appointed to look into the matter of establishing a uniform percentage and the report made at the next meeting of the organization's Fine Paper Division. This uniform percentage recording applies to the Philadelphia trade and is being taken up by the association for the purpose of providing dealers with a uniform percentage cost system for profitable business.

Card Board Situation Discussed

When the Committee on Card Boards met reports were given with specially interesting data on the 2nd and job lot card board situation. There has been great variation in discounts on card boards and the committee, of which E. A. Keller, of the Garrett-Buchanan Company, is chairman, was appointed to recommend to the trade a proper adjustment of this phase of trade practice in discounts on card board. A survey of the trade will be made on the card board situation and recommendations for adjustment made at the coming meeting of the Fine Paper Division of the local association. With these two problems given serious consideration in the program of the meeting, the fine paper dealers were most interested in the action taken and expressed desire for co-operation with the committee in its work.

Golf Tournament For Mill Superintendents

Visiting mill superintendents to the annual convention of the Superintendents Association of the Pulp and Paper Industries will join in the Golf Tournament that has just been completed in the program to be carried out on May 28, at the Lu Lu Temple Country Club. The Golf Tournament will be on the day preceding the opening of the convention and the sporting event will be held in the afternoon. There will be team play and a kickers handicap award to the winners of the first and second prizes in the tournament. Thursday afternoon, May 29, will be given over to a boat trip down the Delaware River, while on Thursday and Friday evenings there will be held two banquets at the Benjamin Franklin Hotel. Friday, May 30, will be filled in with divisional meetings for the various divisions of the association. Those who are interested in seeing the historical places of Philadelphia will spend Saturday, May 31, in sight-seeing tours by bus over the city in addition to a trip to Valley Forge which has been arranged for the ladies attending. Other recent events in the program announced are tours of the Philadelphia paper mills and trips to the Du Pont plant, the Pusey and Jones Company headquarters and inspection of the Jessup and Moore Paper Mills in Wilmington, to follow the boat trip down the Delaware.

The committee in charge of arrangements is composed of the following members:—J. Bertwell White, National Vulcanite Fibre Company, Yorklyn, Del.; Joseph E. Plumstead, Jessup and Moore Paper Company, Wilmington, Del.; Roy H. Underdown, Heller Merz Company, Philadelphia; Frank E. Winslow, General Electric Company, Paper Mill Division, Philadelphia; Mrs. Joseph H. Dow; H. L. Joachim, Container Corporation of America, Philadelphia branch; Joseph H. Dow, Eastwood Wire Company, Philadelphia; John Bingham, Dill and Collins Company, Philadelphia; Charles McDowell, The McDowell Paper Mills, Philadelphia; and Mrs. James G. Ramsey, wife of James G. Ramsey, president of the association and superintendent of the Jessup and Moore Mills, Wilmington.

Reservations have been made for more than 700 conventionites and their friends in the boat trip, which will also include a dancing program on board and luncheon service on the spacious deck. The business sessions will be replete with interesting talks on scientific and practical paper making with modern devices and plant equipment outlined and new methods of chemical treatment and applications to paper manufacture propounded. Leaders in the industry will occupy the platform. There will also be discussions on human engineering of paper mills by experts who have been in practical touch with employment in the industry as heads of the personnel divisions of the mills.

Pulpwood Rates on Imports Laid Before Shipping Board

Former Congressman George W. Edmonds has taken up the question of equalization of wood pulp rates from the Baltic ports with the United States Shipping Board for the purpose of providing an equal increase in the rates recently adopted by the group of shipping interests who are involved in the agreements made a few weeks ago providing for an additional 15 cents per 100 pounds to northern Atlantic ports and an increase of 10 cents per 100 pounds to southern ports. Following a previous communication with the Shipping Board about ten days ago another discussion of the problem of adjustment of rates was taken up by Congressman Edmonds, representing the Ocean Traffic Bureau for the Port

WHERE THE G.T.M. HAS BEEN PRODUCTION COSTS ARE LOWER

Well known in industry are the economies of the G.T.M.—Goodyear Technical Man. He is a rubber expert who sits in on all jobs with a veteran's knowledge of manufacturing problems. He knows costs. He knows production. Whether it is movement of goods, air, liquids, or engine power, by skilful specification of Mechanical Rubber Goods he reduces expense and avoids loss. Swift, smooth, low-cost production is his goal. Many plants similar to yours enjoy new operating freedom from his work. See the G.T.M. to stop those costly leaks.

Your job is paper. The G.T.M. is an expert in your field. He has applied Goodyear Transmission Belting with remarkable success on beater drives. He has specified soft-nozzled Goodyear Water Hose, Goodyear Air, Steam, and Fire Hose to the needs of countless paper manufacturers. The G.T.M. knows paper mills. He is your man, ready for your job.

For full information on savings the G.T.M. can bring to your business, write to Goodyear, Akron, Ohio, or Los Angeles, California.

THE GREATEST NAME IN RUBBER

GOODYEAR

HOSE BELTING MOLDED GOODS PACKING

of Philadelphia, with headquarters in the Bourse Building, last week in a combined meeting of the two shipping organizations, after a preliminary discussion of the matter by the executive committee of the Traffic Bureau of the Port of Philadelphia last week, with E. P. Albrecht, chairman, presiding and when the report of Mr. Edmonds was read.

After showing that there was increasing willingness for the use of the local port by shippers of such products as lumber, wood pulp and fertilizer and going at length into the discrimination shown by the group of Scandinavian shipping interests in the import rates on wood pulp to the ports of Portland, Me., Boston, New York and Philadelphia, which were charged with a rising price of 15 cents per hundred pounds while the southern ports of Baltimore and Norfolk were given a raise of 10 cents per hundred.

In reviewing the statistics of the last available reports of the U. S. Shipping Board for 1928 on the imports of pulp wood and paper products, it was shown that Portland wood pulp imports for that year amounted to 305,990 tons of pulp, while Boston's combined pulp and manufactured paper stocks amounted to 173,983 tons and Philadelphia's imports of pulp wood and manufactured papers amounted to 241,454 tons, while those of Baltimore were 221,358 tons wood pulp and 40,631 tons manufactured paper, with Newport News importations 74,166 tons of pulp wood and 11,711 tons of paper and Norfolk pulp and paper reaching 53,526 tons. There has not yet been compiled the imports for 1929, so that 1928 is the only available recent report of the Shipping Board upon which the Ocean Traffic Bureau can base its import statistics.

No individual report of the imports of papers and paper stocks or pulp wood are included in the Shipping Board's 1928 schedule of imports for New York City. In his protest to the Shipping Board, Congressman Edmonds brings to the attention of the Board the article known as Section 17 of the Shipping Act which states "That no common carrier by water in foreign commerce shall demand, charge, or collect any rate, fare or charge which is unjustly discriminatory between shippers or ports, or unjustly prejudicial to exporters of the United States as compared with their foreign competitors. Whenever the Board finds that any such rate, fare or charge is demanded, charged or collected, it may alter the same to the extent necessary to correct such unjust discrimination or prejudice and make an order that the carrier shall discontinue demanding, charging, or collecting any such discriminatory or prejudicial rate, fare or charge."

The Shipping Act was sponsored by Congressman Edmonds, who was instrumental in having it passed. The Ocean Traffic Bureau for the Port of Philadelphia has sent to the Shipping Board its protest, mentioning this Act which gives it power to step into the rate adjustment on an equalized basis with all ports involved. The Shipping Board has placed the matter on its informal list and has promised to take up the matter with the shipping interests who have made the raise in agreement with several liners plying between the Atlantic Coast and the Scandinavian and Baltic ports. Under Section 15 of the Shipping Act the shipping companies are obliged to file all rate agreements that are submitted to the Shipping Board and it is believed that it will be able to provide an equitable adjustment of the wood pulp rates. The shipping companies involved in the rate agreement are the American Scantic Line, Transatlantic Steamship Company, Swedish American Line, Swedish American Mexico Line, Norwegian-American Line, Wilhelmsen Line and the Scandinavian-American Line.

Fashionable Wedding for Daughter of Thomas M. Royal

Holy Trinity Church, this city, was the scene last week of the fashionable wedding of Miss Eleanor Royal, daughter of Thomas M. Royal, head of Thomas M. Royal & Co., Inc., one of the largest bag producers in the East, when she became the bride of Charles Monson Justi, of Ardmore, Pa. At the wedding were many prominent in society. Among those attending was Simon Walter, head of S. Walter, Inc., wrapping paper and specialty dealers, controlling several paper concerns in this section of Pennsylvania and who was a former associate of Mr. Royal in the trade in this city before the latter became head of the Royal Company. Mr. Walter also attended the wedding of Mr. Royal at the time of his marriage to the bride's mother and when he was a partner in the business of his former associate.

General Electric Extractors for Bedford Pulp and Paper

With the completion of the installation of the General Electric Company 5,000 kw. extractor in the plant of the Bedford Pulp and Paper Company, on Big Island, Va., the operation of the new equipment was started last week. The installation was made under direction of the Philadelphia branch of the General Electric Company, paper mill division, of which Frank Winslow is manager. There were also placed in operation last week the new 1,000 h.p. synchronous grinder motors made by the General Electric Company, five of these having been installed in the plant.

Cleveland Container Co. Improvements

Since purchasing the business of the Keystone Paper Products Company, at Water and Jackson streets, the Cleveland Container Company, of Cleveland, Ohio, has added materially to the units in the plant. The plant is now being managed by A. F. Grinner, of the Cleveland headquarters, who has supervised the innovations in equipment for the purpose of providing for the extension of production of parallel and spiral wound paper tubes. The installation of new units enables the firm to increase its production by 75 per cent. The Cleveland company purchased the equipment and business of the Keystone company about two months ago and has been operating the plant since taking it over as an addition to its Cleveland main quarters.

Scott Paper Co. Reports on Earnings

The Scott Paper Company, of Chester, Pa., reports sales for the first four months of 1930 of $2,801,187, against $2,631,081 in like 1929 period. In the first four months earnings for the common, after charges, taxes and allowance for preferred dividends, were $283,245, equivalent to $1.81 a share on the outstanding 155,998 shares of common stock. This compares with earnings for the common of $206,207 in the corresponding period of 1929, equivalent to $1.37 a share on the then outstanding 150,000 shares of common. April sales of Scott paper on the basis of the four months' report are estimated to have totaled $526,422, against $551,360 in April, 1929. Earnings for the common stock in April are estimated at $37,914, or 24 cents a share, against $28,629 in April, 1929, or 19 cents a share. April results mark the first time this year that gross fell below the corresponding period of 1929. March sales of $931,362 represented an increase of $136,160 and were the largest for any month in the company's history.

Roger Babson Buys A. P. W. Paper Co.

ALBANY, N. Y., May 19, 1930.—Reorganization of the A.P.W. Paper Company was effected this week with the purchase of the controlling interest in the firm by Roger W. Babson, prominent financier of Babson Park, Mass. Negotiations had been carried on for some time as Mr. Babson had made a number of visits to the plant in order to complete the deal. The new owner is also one of the principal stockholders in the New York Power and Light Corporation and the Mohawk Hudson Corporation.

Under the new arrangements William A. Wheeler is retiring as president to be succeeded by his son, Seth Wheeler, who has officiated as an official of the company for many years. Dwight G. W. Hollister, of Wellesley Hills, an officer of the Babson organization, has been named vice president and general manager to take the place vacated by Seth Wheeler. Announcement is made by the retiring head of the firm that he has disposed of his entire interest in the business and will have no participation in its affairs from now on. The other officials will remain as formerly but a number of changes in the board of directors is anticipated.

While officials of the firm were reluctant to discuss future plans it was intimated that expansion will follow.

Algonquin Paper Corp.

A. P. W. Paper Co.

Anglo-Newfoundland Development Co., Ltd.

★ ★ ★ ★

Barrett Company

Blake & Higgins Co.

★

Brown Company

Brownville Paper Co.

Burrows Paper Corp.

★ ★

Crocker, Burbank & Co., Association

E. B. Eddy Co., Ltd.

French Paper Co.

★

Fuji Paper Company Japan

Robert Gair Company

★

Great Lakes Paper Co., Ltd.

Hammermill Paper Co.

Harrisville Paper Corp.

Kimberly-Clark Corp.

★

Mohawk Valley Paper Company ★ ★ ★

Moyer & Pratt

National Paper Products Company

North End Paper Co.

Pacific Mills, Ltd.

Port Alfred Pulp & Paper Corporation

★ ★ ★

St. Regis Paper Co.

★ ★

Sears, Roebuck & Co.

★ ★

Stevens & Thompson Paper Company

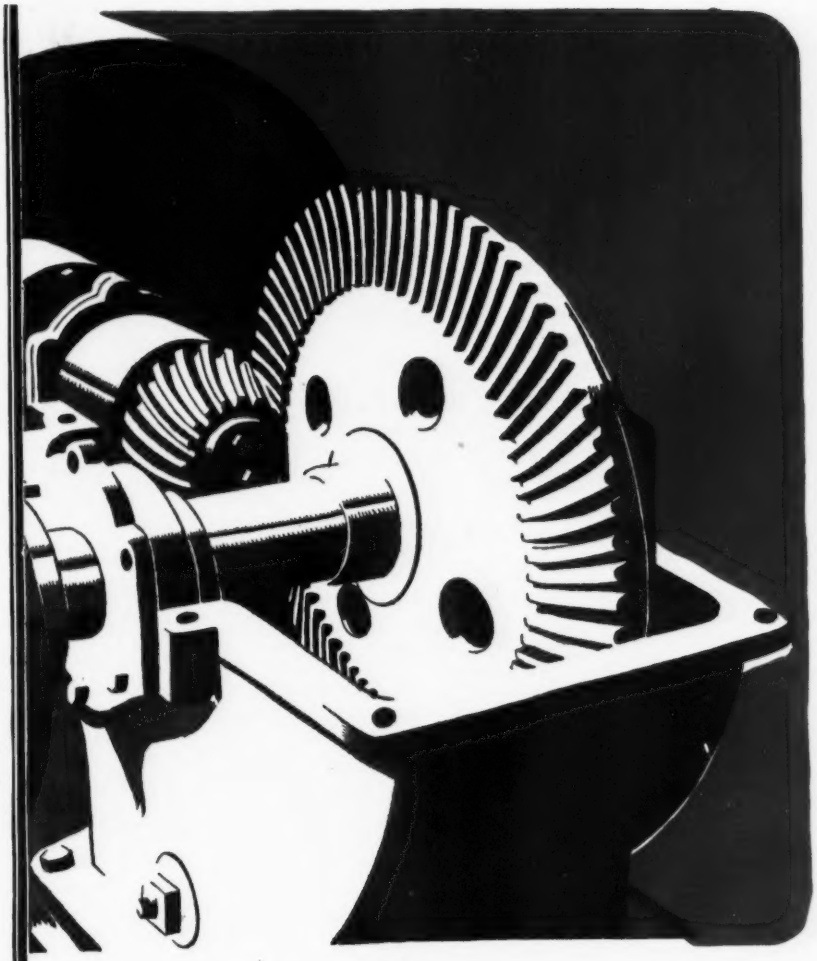
★

Taggart Bros. Co., Inc.

Taggart-Oswego Paper & Bag Corp.

Victoria Paper Mills

Watervliet Paper Co.



Approval and Encores

Conclusive evidence of the practical value of Bagley & Sewall All-Metal Spiral Bevel Gear Drives is their acceptance and approval by the representative mills listed at the left. Each name represents an installation of from one to twenty-nine drives—*each red star indicates a repeat order for from one to ten more.* Bagley & Sewall Drives are helping these mills produce—profitably, speedily, economically. They justify confidence—they'll earn yours, if you'll but give them the chance. We'll gladly tell you all about them.

The Bagley & Sewall Co.

Watertown, N. Y.

Ontario Paper Manufacturers Fairly Active

Fine Paper Mills Report Fairly Satisfactory Conditions—Book Paper Plants Have Orders On Hand Well Into Summer Months—Writing, Ledger and Bond Papers Close Up to Machines—Producers of Kraft Paper Announce Reductions

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., May 19, 1930.—As a result of a meeting of kraft producers and wholesalers held in Toronto a few days ago a reduction of one and a quarter cents f.o.b. mill was decided on for ton lots and three quarters of a cent per pound on small lots, effective May 12. The following resale prices now prevail: No. 1 kraft, car lots, $5.90; ten ton lots, $6.25; three ton lots, $6.50; half ton lots, $7.00; No. 2 kraft fiber, No. 1 Manila, car lots, $5.40; ten ton lots, $5.80; three ton lots, $6.00; half ton lots, $6.50; B. Manila, car lots, $5.00; ten ton lots, $5.25; three ton lots, $5.40; half ton lots, $6.00; gray, car load lots, $4.50; ten ton lots, $4.60; three ton lots, $4.80; half ton lots, $5.25. Whether these prices represent rock bottom or not is a question in the trade which is not too sure that a further break may come later on but in the meantime it is thought that the lower prices decided upon may stimulate sales to some extent. Other coarse papers have improved somewhat in demand of late, although the paper bag market is none too brisk and sales are rather light in that department. Fine papers are moving a little more freely although in practically all departments of the wholesale paper trade small orders are the rule. None of the wholesalers and few of the printers and other consumers are putting in any stocks of size. The printing industry is making fair requisitions but is buying no more paper than current demand in the business calls for.

A number of the fine paper mills report fairly good business and while orders for writing, ledger and bond papers are pretty close up to the machines, the book paper manufacturers have orders on hand that will take them well into the summer months, while tonnages for current shipment are coming in nicely. Improvement in the coated paper market has taken place within the past few weeks and there is also some improvement in grease proof, glassine and waxing papers, as new uses for these lines develop. Converting paper lines are none too brisk, according to manufacturing stationers and envelope manufacturers, but better conditions are looked for in this department this summer. Light weight papers are in good demand and mills manufacturing tissues, toilets and light weight specialties generally are quite busy. Canadian-made bristols, Manilas and blotting papers are in good demand.

Forest Fires Damage Pulp Lands

With 50 new outbreaks of fire reported to the Ontario Department of Lands and Forests in Toronto during the third week in May, Ontario's fire hazard in the northern timberland and pulp lands was assuming more serious proportions than at any time this Spring, although the situation at this writing appears to be pretty well under control. Six dangerous fires along the Algoma Central Railway and principally near Mileage 118 have been reported. In this area one fire raging in 500 acres of bush and pulp land was still out of control last week, fire rangers reported, while several fires started by campers near Mileage 136, north of Garden River were still burning on May 14. Lightning caused several outbreaks in the district. Rainy River and Patricia, the two districts which were hit badly by fire late last year, report several inches of rainfall and rangers in these districts are breathing easier. In the Sault Ste. Marie, Algonquin Park, Trent River, North Bay, Dudbiry and Parry Sound districts, however, worse hazards are reported. Thirty fires have been reported in the Sudbury district during the past few days and in one instance fire rangers were forced to enter the city of Sudbury to extinguish a fresh outbreak. The department has employed 160 extra men in this district. In the other districts low lake levels, dry swamps and parched underbrush create a serious condition in which fires may break out any minute. Within the same period nine fires have been reported out of Fassett timber operations in Ballantyne Township. Pembroke also reported fourteen outbreaks the last few days but stated that all were under control, although the hazard was high. Numerous outbreaks in various sections of the southern part of the North Bay inspectorate have caused the forest branch to recruit about 70 emergency fire fighters to keep the situation under control.

Roofing and Paper Co. to Make Board

Manufacture of insulation board from waste material of shingle mills is to be undertaken in Victoria, B. C., by the Sidney Roofing and Paper Co., according to a recent announcement by R. W. Mayhew, president. The new product will be manufactured in a special factory to be erected immediately on the Industrial Reserve, at a cost of $200,000. Mr. Mayhew stated that experiments with various saw mill wastes have been in progress for some time, and highly satisfactory reports had been received from Springfield, Ohio, where samples had been submitted to expert testing. The board is half an inch thick, light in weight, strong, rigid and light brown in tint. It will be produced for constructural and industrial purposes, Mr. Mayhew explained, being an ideal protection from heat and cold. While Canada was equipped to make all grades of paper, he said, imports last year were worth $12,000,000. The capital invested in paper production in Canada was $580,000,000 and employed 33,000 men to produce 2,381,000 tons of paper.

Western Paper Firm Puts Out Issue

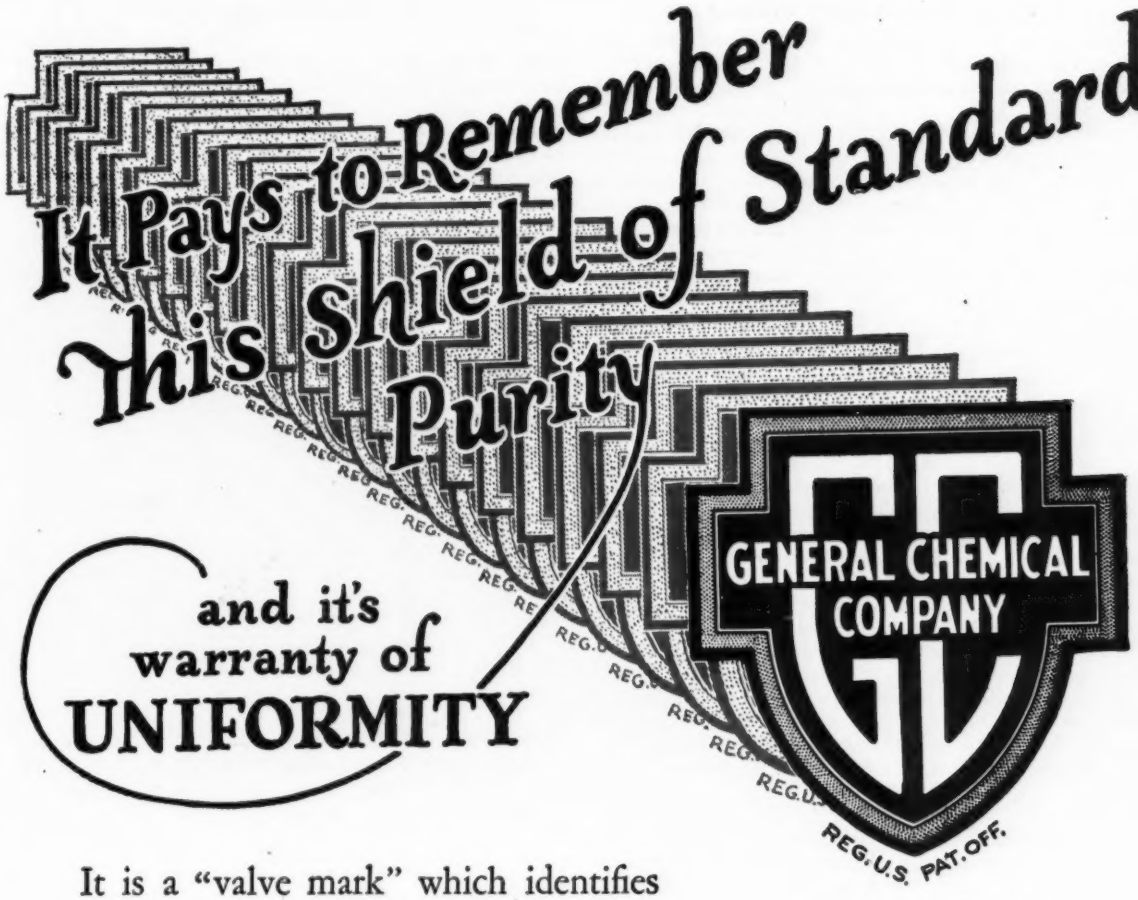
Smith, Davidson & Wright, Ltd., Vancouver, have sold an issue of 3,000 7 per cent preference shares to the Royal Financial Corporation, Ltd., of Vancouver. The stock will be placed on the market in the near future, carrying a bonus of one share of common with each share of preferred. Smith, Davidson & Wright have enjoyed very successful operation for the past twenty-three years and are one of the largest and oldest established paper and stationery houses in Western Canada. They have offices in Calgary, Edmonton, Saskatoon and Victoria, with head office in Vancouver. Proceeds of the issue are being used for the purpose of purchasing a large block of common stock in the Westminster Paper Company, also to supply additional working capital for expansion purposes and liquidation of bank loans. The average earnings over the past four years, applicable to dividends, income taxes and depreciation, are equivalent to 2.41 times the dividend requirements on this issue. The assets behind this first preference stock are equal to $238 for each $100 share.

Fine Papeterie Display at Warwick's

The annual fall display of papeteries by Warwick Bros. & Rutter, manufacturing stationers and paper box manufacturers, is in progress at the company's headquarters on King street West and is attracting considerable interest among paper men and the retail and wholesale stationery trades. Each year sees added features in papeteries added to the firm's De Lux lines and this year has seen, among others, the addition of the Thatchweave series of papeteries and correspondence cards in four shades, white, blue, gray and helio. The line features double correspondence cards with fancy edgings, the box being set off by gold vein box lining. Another striking line is Ambassador boxes in which envelopes and paper have an artistic and originally designed border.

It Pays to Remember This Shield of Standard Purity

and it's warranty of UNIFORMITY



It is a "valve mark" which identifies and distinguishes every product of General Chemical Company. Today, as for years past, it stands as a warranty of uniformity in the product which reaches you in the container bearing this shield. It protects you against variations in quality. It enables you to standardize your processes. It is your guarantee of value.

General Chemical Company's principal products include:

Sulphuric Acid
Nitric Acid
Muriatic Acid
Sodium Sulphide
(Chip Patented)
Acetic Acid
Glauber's Salt
Aluminum Sulphate
Disodium Phosphate
Tri Sodium Phosphate
Anhydrous
Bisulphite Soda
Baker & Adamson Quality
C. P. Acids and Reagents
Insecticides and
Fungicides

GENERAL CHEMICAL COMPANY

40 RECTOR ST., NEW YORK

CABLE ADDRESS, LYCURGUS, N. Y.

BUFFALO
CHICAGO
CLEVELAND
PITTSBURGH
PROVIDENCE
DENVER
ST. LOUIS
LOS ANGELES
PHILADELPHIA
SAN FRANCISCO

THE NICHOLS CHEMICAL CO., LTD., MONTREAL

205

Crown Zellerbach Open Building

The new Crown Zellerbach Building, 343 Sansome street, San Francisco, was opened early in May and is now the headquarters for the executive and administrative staffs of the Crown Zellerbach Corporation.

An outstanding accomplishment in the reconstruction was the conversion of a building, designed years ago, into a modern structure of the type that is transforming the skylines of American cities. The modern architectural design incorporates terra cotta in the lower portion of the building and around the parapet walls above. The building is Class A steel frame construction, 12 stories in height. Rentable area aggregates 65,000 square feet.

Reconstruction of the new corporate headquarters began in the summer of 1929. Due to partial occupancy, all services of the building were maintained during the alteration period in order that tenants would not be inconvenienced.

Over five floors in the building have been devoted to the executive offices and to the offices of affiliated and associated companies. The executive suite will be located on the 11th floor, which will include the offices of Louis Bloch, chairman of the board; I. Zellerbach, president of the corporation; M. R. Higgins, chairman of the executive committee; E. M. Mills, A. B. Martin, and J. D. Zellerbach, executive vice-presidents. These offices are handsomely appointed. Captain John Quinn, decorative artist, is responsible for the furnishings and fixtures. The furniture, panelling and trim were designed by Brass & Kuhn.

The board room of the corporation is located on the tenth floor. The panelling of this room forms the background for ten mural paintings by Warren Chase Merritt, depicting both the history of paper making and scenes of the modern manufacturing process.

Below the executive offices are situated the administrative offices. The sales offices of Crown Willamette Paper Company are located on the seventh floor, in charge of R. A. McDonald, vice-president.

The offices have been planned in order that the consolidated activities of the company may be coordinated and rendered more efficient. The lobby has been finished in marble and is lighted by modernistic fixtures. Three fast-operating elevators of the most improved type have been installed. Hyman & Appleton are the supervising architects responsible for the design of the building which was constructed by Jacks & Irvine.

Boston Paper Market Conditions Unchanged

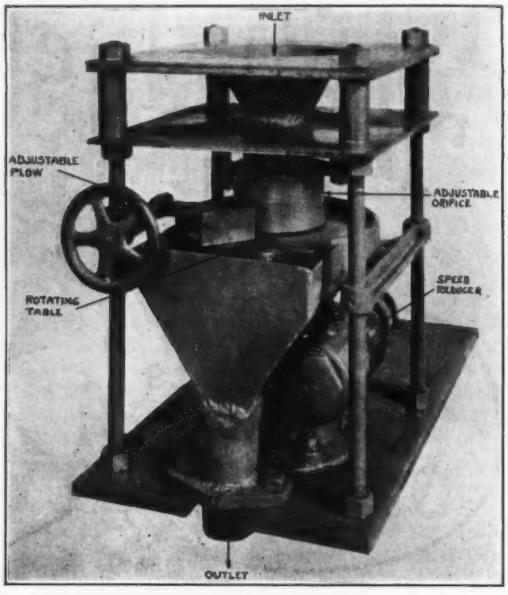
BOSTON, Mass., May 19, 1930.—Conditions in the paper market here are practically the same, but indications favor a still greater improvement. A fair amount of business has been transacted in fine papers. Although mills are not operating to full capacity in many cases, at least, it is expected by some that they will gradually increase to full capacity by the close of the year. There is a generally optimistic feeling among manufacturers, it is stated. A number of enterprising concerns are issuing special advertising with which they are combining historical material and illustrations appropriate to the Massachusetts Bay Tercentary Year. It is felt that the volume of sales of paper to be used for this advertising will be increased by this means. Tariff uncertainty has held up the printing of catalogs with price lists and so has retarded business in fine paper. Glazed papers for boxes are moving fairly well. An average volume of business has been put through in wrapping paper, but the price situation still remains unfavorable, particularly in No. 2 kraft. The box board business has improved, although prices are unchanged.

Paper stock dealers say that business is very quiet in their commodity and that it is difficult to move material. Prices continue to decline in some grades. Mixed papers are down to .20 as a minimum figure and the highest quotation at present is .22½.

Manila rope is quoted at 3.25 to 3.50 ex-dock Boston. Roofing rags are very weak. Foreign dark cottons are quotable at 1.20 to 1.25, compared to a previous range of 1.30 to 1.40. It is reported that a quantity of dark cottons has been offered at a lower figure.

New Dry Chemical Feeder

The illustration presented herewith shows a new dry chemical feeder recently developed particularly to supply salt cake to smelting furnaces. The chemical enters at the top. The amount on the rotating table is determined by the adjustable orifice. As the table rotates, the plow which is adjustable, removes a continuous ribbon of material which is discharged to the hopper. The rate of discharge, which can be varied over a wide range, is accurately maintained at any particular setting of the plow. Any material spilled



NEW CHEMICAL FEEDER

over the edge falls into an annual chamber from which it is carried to the hopper by means of a scraper on the under side of the rotating table.

The feeder is adapted to handle other chemicals, such as alum, etc. This machine is made by Fibre Making Processes, Inc., 8 South Michigan avenue, Chicago.

Cutler-Hammer Buys Union Electric Mfg. Co.

Announcement is made by Cutler-Hammer, Inc., Milwaukee, Wis., that effective May 1 it has purchased the assets of Union Electric Manufacturing Company, also of Milwaukee, manufacturers of Motor Control specializing in a very complete line of drum type control apparatus.

The addition of the Union line to that of the Cutler-Hammer line enables Cutler-Hammer to supply any requirements of its customers in drum type motor control apparatus.

The branch sales offices and warehouse stocks of Union will be consolidated immediately with the Cutler-Hammer branch offices and warehouses. The present factory of Union will be operated as a manufacturing division of Cutler-Hammer. E. F. Le Noir, president of Union, will become a member of the headquarters sales staff of Cutler-Hammer. Most of the Union personnel, particularly those in the Sales and Engineering Departments, will also join the C-H organization.

Virginia-Carolina Paper Men To Play Golf

The Virginia-Carolina Paper Trade Association will hold its annual Invitation Golf Tournament at the Princess Anne Country Club, Virginia Beach, Va., Thursday and Friday, June 12 and 13. Twelve prizes will be contested for by the men and two by the ladies. Entrance fees of $15.00 should be sent to Carl Whitaker, Cauthorne Paper Company, Richmond, Va.

"Let's call the roll"

During the past twelve months these well-known paper makers have installed or ordered the following "Puseyjones" Machines:

242" FOURDRINIER for Albermarle-Chesapeake Co., Inc., West Point, Virginia.

226" FOURDRINIER for Frazer Paper Limited, Madawaska, Maine.

226" (2) FOURDRINIERS for Canadian International Paper Company, Dalhousie, New Brunswick.

222" FOURDRINIER for Mead Straw Pulp Company, Chillicothe, Ohio.

192" FOURDRINIER for P. H. Glatfelter Company, Spring Grove, Pennsylvania.

178" CYLINDER for Brown Paper Mill Company, Inc., Monroe, Louisiana.

178" FOURDRINIER and

160" FOURDRINIER and

156" FOURDRINIER for Union Company, Embretsfos Mill, Norway.

THE SIGN OF TRADE MARK SUPERIOR QUALITY

Pusey and Jones

THE PUSEY AND JONES CORPORATION, WILMINGTON, DELAWARE, U. S. A., Builders of PAPER MAKING MACHINERY : or NEWS : BOOK : KRAFT : BOARD : : Working For, and in Technical Co-operation With, the Forward Thinking Minds of the Industry : Since 1848 : The MARK, shown here, will be found on Every Casting, and on every Other Part of Major Importance, in every Machine produced by This Company : : It is the Mark of Our Own Technical Standards : : A mark of Superior Quality.

New York Trade Jottings

The Leshner Corporation, paper mill supply dealers, have removed their New York offices to larger quarters on the twelfth floor of 277 Broadway, overlooking City Hall Park.

* * *

Mathieson Alkali Works' plant at Niagara Falls is taking over an adjoining factory to use for extended operations. Charles F. Vaughn is manager of the Niagara Falls project.

* * *

New York Stock Exchange has approved for listing 150,000 additional shares of Class A stock of the Union Bag and Paper Corporation, without nominal or par value.

* * *

Liberty Paper Stock Company is now located in its new warehouse and office at 177 South street, New York. The new telephone number is 3910 Beekman.

* * *

Albany Perforated Wrapping Paper Company has notified the New York Stock Exchange of proposed increase in authorized common stock to 236,000 shares from 156,000 shares.

* * *

James P. Heffernan Paper Company, of 25 Water street, New York, announces the retirement of Robert J. Glenn as president and S. B. Behrens as vice-president, after a lifetime of service in the interests of the business.

* * *

Lily-Tulip Cup Corporation, New York, has declared regular quarterly dividends of 37½ cents on common and $1.75 on preferred. Common dividend is payable June 16 to stock of record June 6 while preferred is payable June 30 to stock of record June 6.

* * *

Albany Perforated Wrapping Paper Company reports to the New York Stock Exchange net income of $75,029 for the March quarter. Before Federal taxes equal to 48 cents a share on 156,000 capital shares against $109,079 in the preceding quarter or 70 cents a share and $92,671 in the 1929 quarter or 59 cents a share. For the nine months ended March 31 net income was $262,959 before Federal taxes or $1.68 a share against $148,923 or 95 cents a share in the 1929 period.

* * *

H. A. Haring, author of several books on warehousing and innumerable magazine articles on the same subject, discussed phases of warehousing of particular interest to the paper industry at the regular weekly meeting and luncheon of the New York Division of the Salesmen's Association of the Paper Industry at the Fraternities Club last Monday. Mr. Haring, who has acted as consultant on warehousing difficulties for a number of paper manufacturers, described comprehensively the many advantages of stocking in public merchandise warehouses and gave many examples of what had been accomplished by this system in other industries. Mr. Haring also answered numerous questions from members of the large gathering, which thoroughly enjoyed his instructive and interesting address.

A. Merz Addresses Crocker-McElwain Club

HOLYOKE, Mass., May 20, 1930.—An address was given before the McElwain Club, a club composed of office executives and foremen of the Crocker-McElwain Corp., last week by August Merz, president of the Heller & Merz Corporation of New York City, manufacturers of colors for papers. He described the use of paper coloring material assisted by motion pictures showing factory operations. The 80 present included several Holyoke paper mill superintendents as guests.

Seth L. Bush, who is to soon leave the company to go to Philadelphia, was presented with a brief case on behalf of the club by Robert True, president. A dinner preceded the paper and discussion, which was held at the Hotel Nonotuck.

Detroit Sulphite Co. Makes Quick Repairs

DETROIT, Mich., May 20, 1930.—Due to the burning of its 2500 KVA turbine generator at 9:10 a.m. on Thursday, May 15, the Detroit Sulphite Pulp and Paper Company was forced to cease all operations of its staff. However, it was able to cope with the situation in a manner that shows how well the modern paper mill is completely equipped to efficiently handle the most far reaching emergency.

Within an hour following the accident one paper machine went back into operation; by noon a second machine was in operation and the pulp mill by four P.M. A third machine was in operation by nightfall. The engineering and electrical department had completed the planning and installation of all necessary wiring and switches within the primary and transformer houses as well as the installation of twelve new 100 KVA transformers, which in addition to the already existing transformers will be sufficient to assume the necessary load which the Detroit Edison Company supplied. However, to do this it was necessary to run a high tension line a distance of more than a mile at noon Sunday, May 18, for within seventy-five hours of the time of the breakdown, the entire mill, including the six paper machines, was back in full production, thus causing no great loss of time to either the mill or its customers.

First Quarter Earnings Higher Than Last Year

The consolidated earnings of the International Paper and Power Company in the first quarter of this year, available for dividends on its Preferred and Class A Common stocks, were $670,054.75, 39 per cent greater than in the first quarter of last year.

The balance available for dividends, though greater than a year ago, is not as large as had been expected prior to the development of the present business depression. Slackening consumption and declines in prices have affected earnings adversely. On the other hand, the progressive improvement in mill efficiencies is keeping pace with or exceeding expectations and promises to continue, indicating further increases in earnings which should be accentuated in the last quarter with additional deliveries of hydro-electric power now under contract.

Output of electric energy of the International Paper and Power Company in the first quarter of this year was 1,243,383,000 kilowatt hours, an increase of 8.6 per cent over the output of the same properties in the first three months of last year.

Chemical Paper Mfg. Co. Starts New Machine

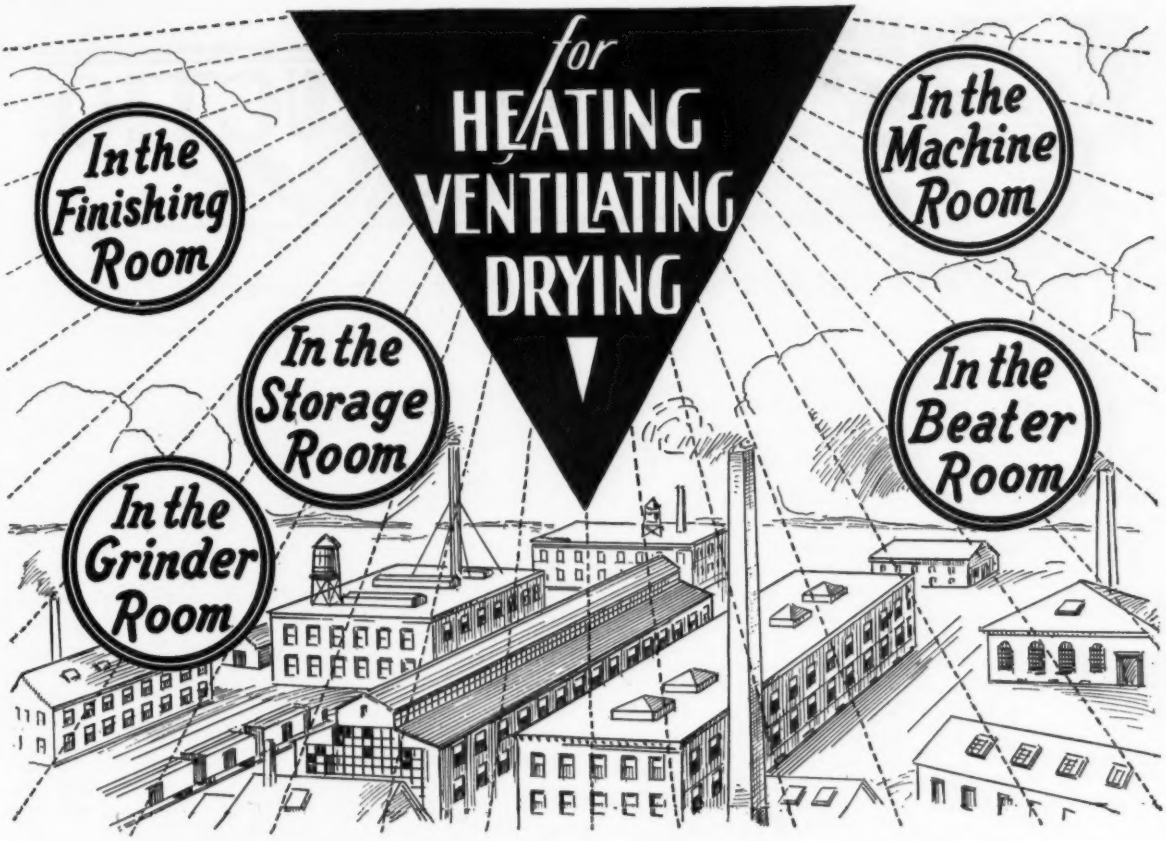
[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., May 20, 1930.—The new box board machine of the Chemical Paper Manufacturing Company housed in a new two story brick building has begun operations and Rice, Barton & Fales of Worcester who built this new machine are engaged in rebuilding another machine along similar lines but of smaller size. The new six mold machine is designed to produce 40 tons a day and has 87 drying cylinders each 35 inches in diameter and 150 inches long able to turn out box board of a maximum width of 94 inches. Until the installation of this machine the company had more orders than it could care for.

A. P. W. Paper Co. Gets Pulp From Nova Scotia

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., May 19, 1930.—A fourth cargo of pulp from Nova Scotia was received this week at the local terminal by the A.P.W. Paper Company when the Norwegian freighter *Elvira* docked here with several hundred tons. A large force of stevedores assisted employees in unloading the shipment which incidentally was the largest yet received over the water route. Many more shipments will be transported here by the company during the summer before the weather interferes with shipping facilities and it is understood that this new method of transportation is proving to be far more advantageous than it had been when transported by railroad.



SAVE TIME AND MONEY ON NEEDED EQUIPMENT

The Briner Economizer

Ross-Grewin High Pressure Ventilation

Ross Vapor Absorption Systems

Ross-Wagner Sulphate Recovery Systems

Ross Machine Room Ventilation

No matter what the requirements or the problem to be overcome, the extensive experience of Ross engineers enables them to handle your needs quickly and intelligently. Apparatus or materials are shipped promptly, installations completed with minimum loss of production time and total expense for the job is thus kept at lowest possible figure.

Any of our offices is prepared to give the most prompt dependable service on your requirements—large or small—regardless of locations.

Ross Systems For Beater, Storage and Finishing Rooms

Trim Conveying Apparatus

Motor Cooling Equipment

Loft Drying Systems

Felt Drying Systems

Plate and Sheet Metal Work

Fans—Filters—Machine Hoods

Calender Cooling Systems

J. O. ROSS ENGINEERING CORPORATION

201 North Wells Street
CHICAGO

Main Office—122 E. 42nd Street
NEW YORK

519 American Bank Bldg.
PORTLAND, ORE.

ROSS ENGINEERING OF CANADA, LIMITED

NEW BIRKS BLDG., MONTREAL

ROSS SYSTEMS
HEATING—VENTILATING—DRYING

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Chicago, Ill.—The Vortex Manufacturing Company, 421 North Western avenue, manufacturer of paper cups and containers, has plans maturing for a new four-story brick addition for large increase in present capacity, reported to cost close to $100,000, with machinery. It is understood that bids will soon be asked on general contract. Weiss & Neistadt, 53 West Jackson boulevard, Chicago, are architects.

Danville, Ill.—The Cornstalk Products Company is said to be planning early rebuilding of portion of paper pulp unit at local mill, recently destroyed by fire, with loss reported in excess of $60,000, including equipment.

Albany, N. Y.—The Albany Perforated Wrapping Paper Company, Broadway, manufacturer of paper specialties, has been acquired, through a controlling interest, by Roger W. Babson, financial statistician, and the American Public Welfare Trust, an associated organization, both located at Babson Park, near Wellesley, Mass., which will be prominent in the management in the future. The plant will be continued at present location, and it is understood that a general expansion program will be carried out. Mr. Babson has secured the interest of William A. Wheeler, president, who retires from that office; he will be succeeded by Seth Wheeler, heretofore vice-president of the company.

Newark, N. J.—The Mono Service Company, 301-89 Verona avenue, manufacturer of paper cups and containers, has filed plans for a one-story addition to plant, to be used for increased production. Estimated cost has not been announced.

Beechwood, Ohio—The Falls Paper Box Company, care of Ulmer, Berne & Gordon, Ulmer Building, Cleveland, Ohio, attorneys, recently organized with a capital of 11,300 shares of stock, no par value, is said to be planning early operation of a local plant for the manufacture of paper boxes and containers. Names of principals are temporarily withheld.

Rochester, Mich.—The Rochester Paper Company, manufacturer of blotting papers and kindred stocks, is carrying out a general expansion and improvement program at its mill, and it is understood that new equipment is being installed for increased capacity, as well as to improve general operating efficiency. The plant comprises about 20,000 square feet of floor space, and is running a full production schedule. S. J. Fortune is general superintendent.

Chillicothe, Ohio—The Mead Corporation, Chillicothe, recently organized to take over and consolidate the Mead Pulp and Paper Company and the Mead Strawpulp Company, both with mills at Chillicothe, and the Mead Fibre Company, Kingsport, Tenn., has arranged for a bond issue of $9,500,000, a portion of the proceeds to be used for carrying out the consolidation, as well as general expansion in operations. The company specializes in the production of corrugated board, liner board, etc., as used in the manufacture of boxes and containers. Work has been under way on extensions in the Chillicothe mill to provide for larger output, and it is understood that these additional facilities will be available at early date. George H. Mead is president.

Erie, Pa.—The H. F. Watson Paper Company, East Sixteenth street, manufacturer of insulating paper stocks, roofing and building papers, etc., is reported planning a new plant unit on Holland street, in the vicinity of Sixteenth street, with present indications that actual construction will be deferred for a number of months, when architect and engineer will be selected. The project is estimated to cost close to $175,000, with equipment, and will provide for considerable increase in present output.

Piermont, N. Y.—The Robert Gair Company, 420 Lexington avenue, New York, manufacturer of corrugated paper boxes and containers, will take bids during the summer on a new addition to plant at Piermont, to be used, it is understood, primarily for storage and distributing service. It is reported to cost more than $200,000, with equipment, and will be of fireproof type. William Higginson, 101 Park avenue, New York, is architect and engineer, and bids will be asked from that office.

Los Angeles, Cal.—The Los Angeles Paper Box Company, 3324 South Main street, manufacturer of folding paper boxes, cartons, etc., has recently completed a new plant unit in the Hostetter Industrial District, and will occupy for considerable increase in capacity. A full working force will be employed.

East St. Louis, Ill.—The Philip Carey Company, Lockland, Cincinnati, Ohio, manufacturer of mill board, insulating board, asbestos products, etc., has acquired property at East St. Louis, and plans early construction of plant unit at that place for the production of a new insulating specialty. The project is reported to cost close to $500,000, and will be placed under way at early date. Roscoe B. Crabbs is vice-president and treasurer.

Bucksport, Me.—The Main Seaboard Paper Company, Augusta, Me., an interest of the Maine Central Power Company, same address, is said to have work in active progress on proposed new pulp and paper mill at Bucksport, previously reported in these columns. Contracts for equipment are being let, including recent order to the Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., for two sectional paper machine drives. The plant will be developed for a capacity of about 270 tons of news print per day, and will represent an investment of approximately $8,000,000. George F. Hardy, 309 Broadway, New York, is engineer for the plant, for which a general contract was let some weeks ago to the Morton C. Tuttle Company, 31 St. James street, Boston, Mass. The Maine Central Power Company is carrying out a hydroelectric power project on the Kennebeck River, near Bingham, in connection with the paper mill development. A transmission line will be constructed between generating plant and paper mill, with power substation at last noted place. The power enterprise is understood to represent an investment of $2,500,000, and the output of the plant will be used as well for other industrial service in this district.

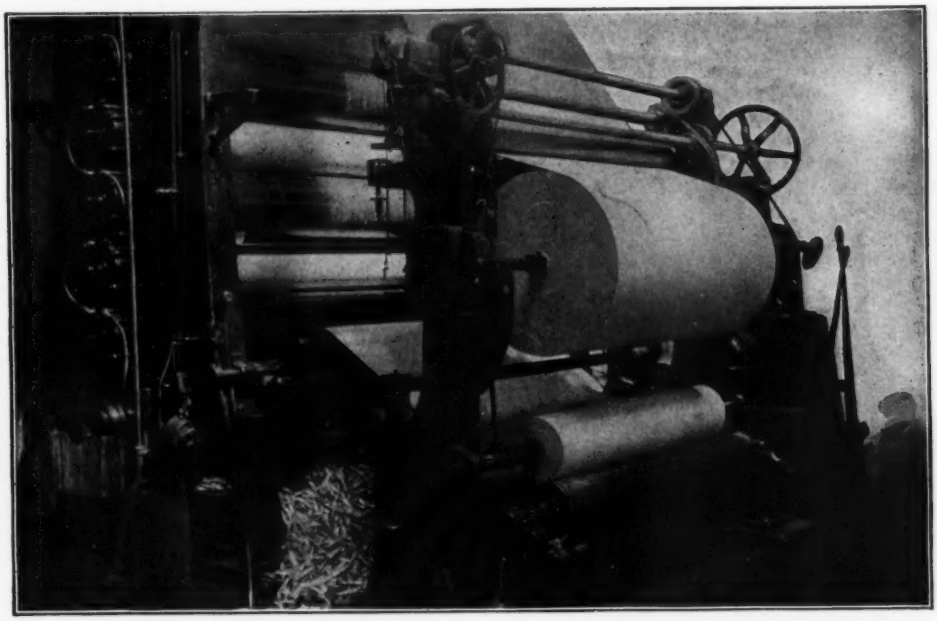
Buffalo, N. Y.—Fire, May 15, damaged a portion of the storage and distributing plant of the Great Lakes Paper Stock Company, Inc., 212 Ohio street, with loss reported at $10,000.

Chicago, Ill.—The H. M. Van Housen Corporation, 81 West Lake street, manufacturer of paper novelties, card stocks, etc., has leased the two-story factory at Center street and Seminary avenue,

"M & W" Drum Winders for Super-Calenders

PERMITS FASTER SPEED FOR CALENDERING

Shipping Rolls are made direct from Supers without rewinding the Rolls



Two-Drum Type Winder (Photograph taken in one of the mills of the Kimberly-Clark Co.)

Built with Two or Four-Drums
Makes use of wide stacks desirable

Rolls trimmed direct from Super-Calenders —(retrimming unnecessary).

Rolls readily changed from winding drums to unwinding shaft by means of self-contained electric motor lift.

Straight, hard rolls are made without wrinkles . . . no soft rolls or telescoped ends.

Winders equipped with automatic tension regulation to eliminate paper breaking between calender and winder . . . and to regulate the hardness of rolls to be wound.

For wide stacks of Calenders, the "M & W" Four-Drum Super-Calender Winder reduces the waste of finished product to a minimum.

All features of the well-known "M & W" Four-Drum Winder used for making shipping rolls direct on paper machine are retained—such as independent winding of rolls on independent shafts, etc.

"M & W" Four-Drum Super-Calender Winders equipped with Removable Top and Bottom Slitters. "M & W" Brass Collapsible Winding Shafts are the latest improvement for High Grade Mills.

Further Particulars Upon Request

THE MOORE & WHITE CO.
PHILADELPHIA, PA.
N. PHILA. STA. PENNA. R.R.
PAPER MILL MACHINERY

Patents Pending for Recent Improvements to "M & W" Drum Winders

for a term of years, and will occupy for expansion. The building comprises about 25,000 square feet of floor space, and it is proposed to double the present plant output. The company has taken an option to purchase the building and will concentrate production for the most part at this location.

Washington, D. C.—The House of Representatives is considering a bill introduced on May 12, by Representative Wood, Indiana, providing for an appropriation of $1,000,000, for the construction of a Government owned paper mill on site to be selected, to be operated in conjunction with the Bureau of Engraving & Printing. It is understood that the project will be carried out under the direction of the last noted department.

Montreal, Que.—The St. Lawrence Corporation, Ltd., Montreal, has been organized to take over and consolidate the St. Lawrence Paper Mills Company, Ltd., Three Rivers, Que.; Lake St. John Power and Paper Company, Ltd., with main mill at Dolbeau, Que.; and the Brompton Pulp and Paper Company, Ltd., with mills at East Angus and Bromptonville, Que. The consolidated organization will continue operations at present plants, and general expansion in output is contemplated. It is understood that Ernest Rossiter, Montreal, head of the St. Lawrence Paper Mills Company Ltd., will be president of the new organization.

Donnacona, Que.—The Donnacona Paper Company, Ltd., is now operating at its new local insulating board mill, recently completed, producing finished material of particularly high quality. The plant is utilizing the wood waste of some of the lumber mills of the company. Maximum capacity will be maintained for an indefinite period. The company is operated by Price Brothers & Company, Ltd., Quebec, Que.

New Companies, Etc.

New York, N. Y.—The Aldine Paper Mills, Inc., 333 Hudson street, has filed notice in change of name to the Aldine Paper Company.

Brooklyn, N. Y.—The Shapiro Brothers Paper Company has been incorporated with a capital of $20,000, to deal in paper stocks of various kinds. The company is represented by Weberman & Goldstein, 220 Broadway, New York, attorneys.

Chicago, Ill.—The Arrow Playing Card Company, 800 Sibley street, manufacturer of card and board stocks, etc., has arranged for an increase in capital from $60,000 to $120,000, for general expansion.

Brooklyn, N. Y.—The Arch-Built Corrugated Products Corporation, 147 Forty-first street, manufacturer of corrugated paper goods, has arranged for an increase in capital from $50,000 to $100,000, for general expansion.

B. C. Forest Production Declines

Reporting on the forest industries of British Columbia for 1929, the Hon. F. P. Durden, Minister of Lands for the Province, says the value of production last year was $93,301,000 as compared with $93,787,000 in the previous year. In spite of the general slump prevailing during the last six months of the year, the value of forest products and the industrial position of the industry were maintained. Such items as pulp and paper products, shingles and boxes show a distinct falling off, and lumber, minor products and the wood working industry show an increase, which offsets the above decline.

The general pulp and paper situation in Canada is reflected in the production and value of this product. The production of news print in British Columbia declined 10 per cent and the value of the products $2,355,000, or 14 per cent. It may be stated, however, that British Columbia mills were able to operate as near capacity as the mills in any other section of Canada. The situation is only temporary and has not destroyed the confidence in the future of pulp and paper on the Pacific Coast, as is shown by the development program of the Powell River Company and the many inquiries reaching the Department in regard to sites suitable for development.

To Stop Using Word "Mills" in Trade Name

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., May 21, 1930.—A corporation selling and distributing paper products signed a stipulation agreement with the Federal Trade Commission to stop use of its corporate or trade name simulating the corporate name of a competitor, and from use of its own corporate or trade name in any way so as to confuse the public into believing that the respondent's business and that of the competitor are one and the same, or that the respondent is connected with this competitor.

The respondent corporation also agreed to cease and desist from use of the word "Mills" in its trade name or in any other way in soliciting the sale of its products, which may have the tendency to deceive the public into believing that it owns, operates, or controls a mill wherein are manufactured the products which it sells.

The stipulation itself follows:

"Respondent, a corporation, engaged in the sale and distribution of paper products in interstate commerce, in competition with other corporations, individuals, firms and partnerships likewise engaged, entered into the following stipulation as to the facts and agreement to cease and desist forever from the alleged unfair methods of competition as set forth therein.

"Respondent agreed to cease and desist forever from the use of its corporate or trade name simulating the corporate name of its competitor, Northern Paper Mills, in soliciting the sale of and selling its products in interstate commerce, and from the use of its said corporate or trade name in any way so as to confuse the purchasing public into the belief that the business conducted by said respondent and that of its said competitor, Northern Paper Mills, are one and the same, or that said respondent is connected or associated, in any way with the said Northern Paper Mills. Respondent also agreed to cease and desist from the use of the word "Mills," either independently or in connection or conjunction with any other word or words, in its corporate or trade name, or in any other way, in soliciting the sale of and selling its products in interstate commerce, which may have the capacity or tendency to confuse, mislead or deceive the purchasing public into the belief that it owns, operates and controls a mill, plant or factory wherein are manufactured or fabricated the products which it sells and distributes in interstate commerce.

"Respondent also agreed that if it should ever resume or indulge in any of the practices in question, this said stipulation as to the facts may be used in evidence against it in the trial of the complaint which the Commission may issue."

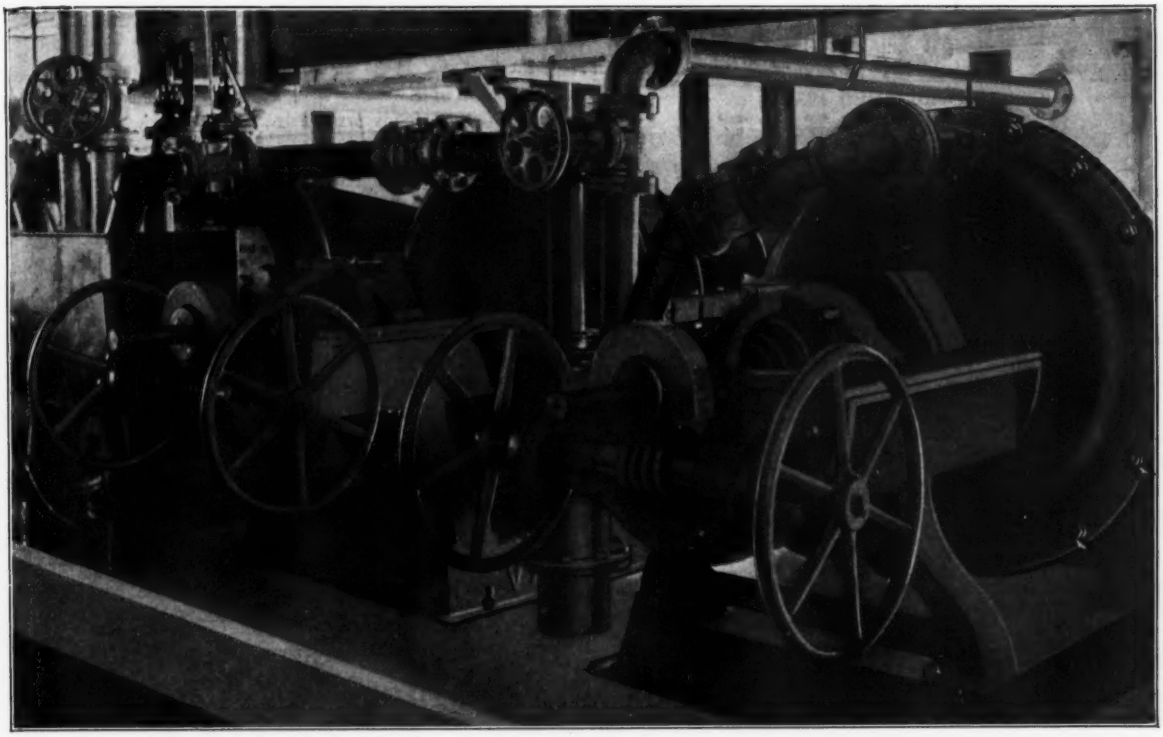
New York Paper Trade Golf Tournament

The 1930 tournament of the New York Paper Trade Golf Association was held on May 13 and 14 at Shackamaxon Golf Club, Westfield, N. J., with the added enthusiasm of fine weather and the usual complete attention to all details by the permanent secretary, H. A. Earle.

Two days of good fellowship and keen competition resulted in the following winners:

Championship, and Luke Trophy: .....C. S. McMillen.
Low Gross: .....A. Calder.
Low Net Clough Prize: .....F. A. Leahy.
Kickers Handicap: .....E. D. Peck.
1st Flight: .....C. S. McMillen and W. B. Plunkett.
2nd Flight: .....A. D. Williams and W. B. Anders.
3rd Flight: .....B. C. Hill and H. D. Benzing.
4th Flight: .....G. S. Johnston and T. W. Harrington
5th Flight: .....J. S. Filbert and K. S. Warner.
36 hole medal play handicap: .....H. S. Chalfant.

After play on Tuesday, the annual dinner of the association was livened by the Leyden Quartet and the report of the nominating committee, ably rendered by H. F. Harrison. The officers for the coming year are: President, O. F. Marquardt; Vice President, B. C. Hill; Treasurer, W. R. Anders; Secretary, H. A. Earle.



BUILT AS YOU WOULD BUILD IT

To help you produce quality paper for less money, this Valley Jordan was designed.

To do this, it embodies many features of improvement which the paper industry has long been waiting for in a Jordan.

It is a Jordan built with a purpose—a Jordan built to answer the special requirements of your own, particular mill conditions.

For example, here are some of its interesting features: split-shell or solid-shell with one-piece shell filling . . . anti-friction bearings . . . micrometer adjustment . . . heavier construction . . . guaranteed coupling performance . . . bandless plug.

The Valley Jordan is available in several different types of design, to meet varying mill requirements. We can furnish your Jordan to improve your mill conditions.

Write the Valley Iron Works Company, Appleton, Wisconsin, for more information.

VALLEY

Equipment for Paper and Pulp Mills

New York Office: 350 Madison Ave.
Western Manufacturing & Sales Division: Smith & Valley Iron Works Co., Portland, Oregon
Canadian Representatives: Pulp & Paper Mill Accessories, Ltd., Montreal, Canada

PAPER TRADE JOURNAL
ESTABLISHED 1872

10 East 39th St., New York

Henry J. Berger
Editor

Ronald G. Macdonald
Editor Technical Section

Herbert J. Laughton
Associate Editor

Thomas J. Burke, C. A.
Editor Cost Section

Reginald Trautschold, M. E.,
Power Engineering Consultant

Price, Per Copy, 10 Cents
United States, Per Annum, $4.00
Canada and Foreign Countries in Postal Union, $6.00

Member A. B. C. Audit Bureau of Circulations

Vol. XC New York, May 22, 1930 No. 21

PAPER CONTAINERS FOR FROZEN FOODS

Rapid expansion of the use of quick frozen foods indicates that enormous quantities of parchment, waxed paper, glassine, cellophane, waxed cartons, corrugated shipping containers, etc., will be required in the future. A large part of the success of frosted foods depends on the packing.

The Birdseye method, which is that used by the General Foods Corporation, calls for first the packaging and then the freezing process. The other methods freeze before packaging. Both methods are apparently proving successful, although the relative merits of the two methods have not yet been fully determined.

Use of paper and paper board in the packaging of food is very considerable. The carton is lined with either a high grade paper or sometimes with cellophane; then there is the carton itself, then a cover for the carton; then a large container for the small carton, and in addition paper is used for sealing with gummed tape lined with kraft.

The Atlantic Coast Fisheries in their packing use a solid carton lined with kraft. The adhesive used to attach the liner to the carton is asphalt, in order to give water and moisture proof qualities. A tight seal involving the use of gummed tape is of major importance in all frosted food products.

Products which are handled most by the quick freezing method are fish, fruit and meat. The quick freezing process got its first start in the fish industry, but has spread rapidly into the meat and fruit fields. In the fruit field not only small fruits are being frozen, but it is now possible to purchase frozen quarters of oranges and grape-fruit which have been allowed to ripen on the tree.

Leading producers, including the General Food Corporation, the Atlantic Coast Fisheries, Swift & Co., and Wilson & Co., have had frozen foods on the market for some time past. In addition Armour & Co., George A. Hormel & Co., Frigidized Foods, Inc., and others, are experimenting and watching with interest the merchandising being done by others.

General Foods Corporation began using Springfield, Mass., as an experimental market to determine the consumer possibilities of frozen foods in March. The company has announced the results of the first few weeks of experimentation. On a recent Saturday 76 per cent of the sales were made to customers who had purchased frosted foods previously.

The number of individual sales made on Saturday, April 5, increased 33.4 per cent over sales made on Saturday, March 29, which in turn showed an increase of approximately 40 per cent over Saturday, March 22. Total dollar sales for the two Saturdays showed an increase of more than 40 per cent, a significant fact, because the rate of dollar increase was higher than the number of sales made.

Ten representative grocery stores, five of them members of a chain, were chosen for the experiment and the foods sold to the public included eighteen different meat items, two vegetables, three fruits, and three varieties of fish, including oysters.

Problems of distribution and handling have not been wholly worked out but the probabilities are that this method of handling a wide variety of foods will gain decidedly in popularity, and that an exceedingly large volume of paper and paper board will be needed for packaging.

THE OLDEST PAPER MANUFACTURER

An inquiry recently has been more or less widely circulated among representative paper men "as to the oldest paper manufacturer now operating in the United States and the year in which he started business or the approximate year." This inquiry finally reached the office of the PAPER TRADE JOURNAL and was submitted to Mr. Ralph M. Snell, who for a long number of years past has been greatly interested in the historical data of the pulp and paper business, much of which has been most interestingly presented in *Superior Facts*, the house organ of the Paper Makers Chemical Corporation, of which Mr. Snell is one of the vice presidents. Mr. Snell generously answered this question as follows:

"I have your favor of recent date requesting information as to the oldest paper manufacturing concern still operating. I am not exactly sure as to just what is wanted, but the following brief outline of papermaking history might give what is wanted.

"The first two mills, the old Rittenhouse and DeWees Mills in Pennsylvania ceased to exist over 150 years ago. The third mill to be built was the Old Ivy Mill near the beginning of the 18th century. This continued in operation by the Willcox family who were its founders for over 100 years. In fact, this mill was still running up to within a few years ago owned and managed by Mr. Joseph Dohn a direct descendant of the Willcox family. This is probably the longest record of any paper mill operating continuously and in the same family and place.

"The fifth mill to be built in the United States was in Milton, Mass. It was started by Daniel Henchman, Thomas Hancock and others in 1728. This property passed through different ownerships, and by 1773 there was a group of four mills in this locality. Some time the latter part of the 17th century Daniel Vose became interested in these mills, building still another mill in 1795, and Mark Hollingsworth was employed by him as foreman. Vose and Tileston operated two of the other mills, thus establishing at that date the names of three of our permanent papermaking families of today.

"The Hollingsworths still identified with Tileston and Hollingsworth are direct descendants of Mark Hollingsworth. However, the original mills at Milton have probably not operated for about 50 years.

"The Vose and Hollingsworth families who started first in West Groton and then at East Walpole are also descendants of these papermaking families, as well as the Hollingsworth of Hollingsworth and Whitney, who started at Watertown, Mass., and are now located principally at Waterville, Me.

"James Crane learned the paper business in the old mills at Milton and afterward built a mill of his own at Newton Lower Falls, Mass., in which his younger brother, Zenus Crane, learned the business, afterward building a mill in Dalton, Mass., in 1801 which was the foundation of Crane & Co. who probably have operated the longest in the same place and under the same family name of any papermaking concern in America.

"Knowlton Brothers of Watertown, N. Y., also has a record for long operation in the same place and in the same family."

Mr. Snell is just now assembling and amplifying his notes with the idea of printing them in book form as a history of pulp and paper manufacture in the United States. He will be grateful to anyone who has data that will be likely to be helpful to him in this work if they will send it to him in care of the Paper Makers Chemical Corporation, Holyoke, Mass.

The PAPER TRADE JOURNAL urges anyone who can to cooperate in this matter as Mr. Snell's book when printed will undoubtedly deserve a permanent place in the literature of papermaking.

Harold J. Edgar Establishes Fellowship

Announcement of another fellowship gift for the Institute of Paper Chemistry at Lawrence college, Appleton, Wis., and the name of the student who is to receive it was made today by Henry M. Wriston, president of the college and director of the Institute. The fellowship carrying an annual stipend of $500 and made possible by a gift from Harold T. Edgar of the Edgar Brothers Company in New Jersey has been awarded to Edward H. Voigtman effective with his graduation from the University of Wisconsin in June.

The Edgar gift came to the Institute following a visit made by Mr. Edgar, alumnus of Rutgers, treasurer and sales representative of the firm bearing his name, specializing in the manufacture of Edgar paper clays. Interest in the Institute of Paper Chemistry as a contribution to the future progress of the paper industry prompted Mr. Edgar's visit. So impressed was he with the start made that he voluntarily suggested the creation of a fellowship fund to help deserving students. In presenting the gift Mr. Edgar expressed "appreciation of the vision you have shown in seeing the need for such a school as has been established and pushing the school to a point where it has become a solid reality."

Mr. Voigtman, recipient of the fellowship was thus honored because of his excellent undergraduate record in the college of engineering of the University of Wisconsin. Mr. Voigtman was graduated from Marinette High School and later moved to Sheboygan. He will enter upon graduate study at the Institute in September.

Butler Paper Co. Made Resistall Agent

The Butler Paper Company of Detroit, Mich., has been appointed an agent for Resistall Linen Ledger and Resistall Bond, two of the water, oil and abrasion resistant papers made by the L. L. Brown Paper Company of Adams, Mass.

S. F. Shattuck Heads Human Relations Course

A problem course consisting of a "Seminar in Human Relations in Industry" will be offered at Lawrence college, Appleton, Wis., next year as another part of its program of relating college education to industry. The course which is offered jointly by the departments of Economics and Business, Psychology, and Sociology, will consist of regular round table discussions headed by a group of professors from the college and a group from the staff of the Kimberly-Clark Corporation under the general chairmanship of F. S. Shattuck, a vice president of the Kimberly-Clark Company in charge of the department of personnel.

President Henry M. Wriston in commenting upon the establishment of the new courses points out that "it will attempt to meet one of the most current objections raised against college trained men, namely, that they are unable to offer solutions in spite of their ability to discover the facts." Dr. Wriston further stated that "it is an attempt to break down departmental barriers to secure a greater correlation of interest and subject matter involved in study of those subjects closely related to the problems of industry."

Selected problems, such as wages, incentives, pensions, rating methods, and welfare, will be studied from the standpoint of the employee, the corporation, and society. The aim is to cut across the divisions of academic departments as well as to combine the views of the man of affairs and the scholar. The student's work will consist of intensive research in a chosen problem. Comprehensive studies will be made by the students on problems assigned by the joint faculty and corporation group and reports made at the round table seminar meetings. The new course is a further step in a general program launched by Lawrence college to bring its resources into closer contact with industry in general.

The Institute of Paper Chemistry recently organized is the first important step in that program. A later development has been the series of vocational conferences conducted by the college for its students who plan to enter business and professional fields. In these vocational conferences discussions are lead by prominent Lawrence alumni who are making a success in the field which they represent.

The new course in "Human Relations and Industry" headed by Mr. Shattuck will be opened only to seniors showing special fitness for the type of study involved.

Brotherhood Negotiates With Great Lakes

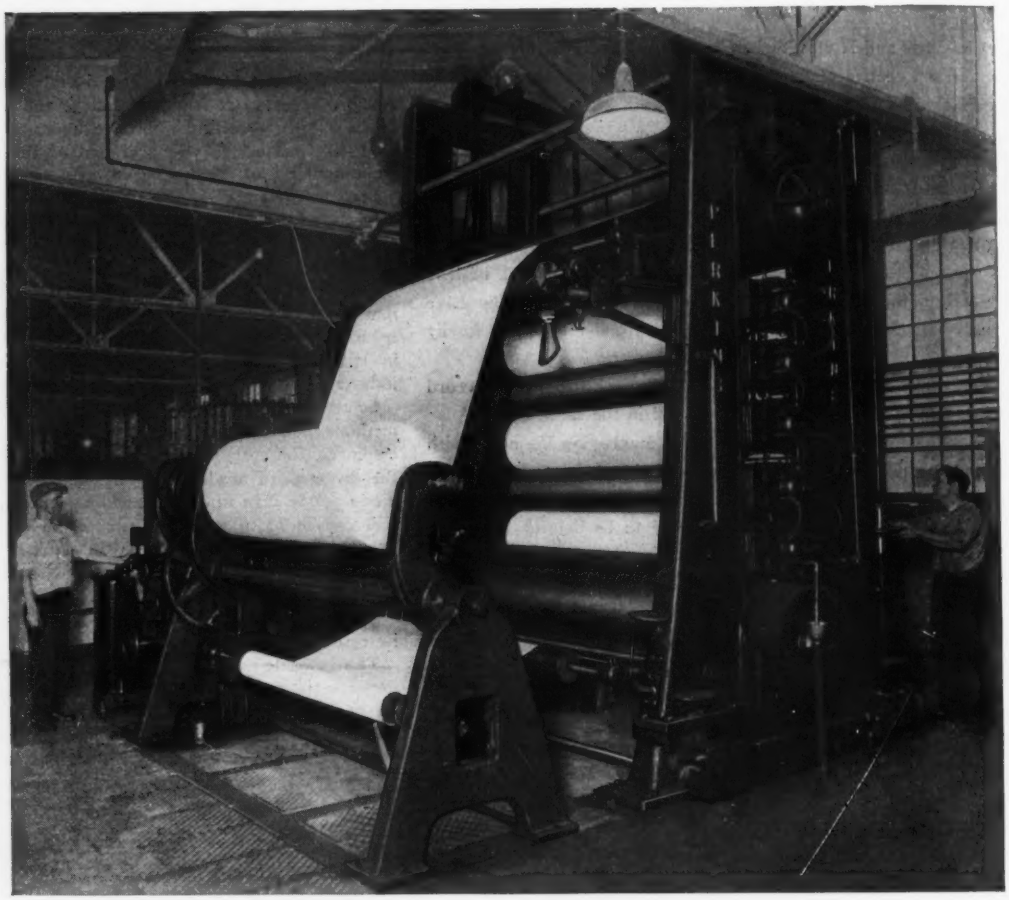
[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., May 19, 1930.—The International Brotherhood of Papermakers is experiencing difficulty in signing new wage and working agreements with the Great Lakes Paper Company inasmuch as it is claimed that union members have never been paid the proper wage scale on the 304 inch machine made some time ago by the Bagley & Sewall Company of Watertown. The union scale is based on the speed and width of the machine and the situation has resulted in Matthew Burns, president, personally carrying on negotiations. The Backus group controls three more mills in that section and the signing of wage and working agreements at these mills is being held up pending the outcome of the situation at Fort William.

With but a few exceptions all wage and working agreements have now been signed to continue for another twelve months. While no date has yet been fixed for a final conference with officials of the Union Bag and Paper Corporation, it is said that a preliminary meeting will be held next week at which Frank P. Barry and Arthur Huggins will represent the union organization. An audit of the books is being made in this city now by David S. Larner, an official of the organization, and this work will be completed in a few days.

Arthur Huggins, secretary of the organization, left during the week for Cleveland to attend an executive board meeting of the wire weavers' association. During his trip he plans to address a joint meeting of all unions in Merritton.

PERKINS Roller Bearing Web Super-Calender



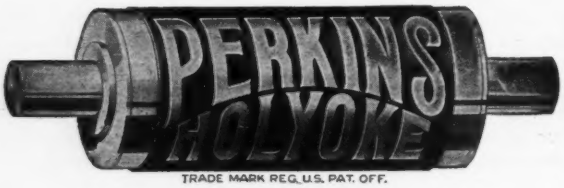
Perkins engineers have built into this 7-Roll Roller Bearing Web Super-Calender the strength necessary for smooth steady operation under the most severe working conditions.

This Calender is efficient in production, easy in operation and low in power consumption.

Complete information concerning this and other Perkins finishing machinery sent upon request.

"NO CALENDER CAN BE BETTER THAN THE ROLLS IN IT"

B. F. Perkins & Son, Inc., Holyoke, Mass.



TRADE MARK REG. U.S. PAT. OFF.

Cotton Rolls	Web Supercalenders	Mullen Paper Testers
Paper Rolls	Friction Calenders	Tensile Testers
Embossing Rolls	Embossing Calenders	Ventilating Fans
Chilled Iron Rolls	Sheet Calenders	Rag Cutters
Granite Press Rolls	Platers	Stock Cutters
Glassine Supercalenders		Paper Dampeners
		Bleach Ejectors

Section of the
Technical Association of the Pulp and Paper Industry
Edited by Ronald G. Macdonald, Secretary

Paper Research Literature, VII (Revised)

Fifth Supplement

List of Contributions by Members of U. S. Bureau of Standards, Dept. of Commerce, 1929

By Clarence J. West[1] and B. W. Scribner[2]

The original list, covering the publications of members of the U. S. Bureau of Standards from 1910 to 1924, appeared in PAPER TRADE JOURNAL 80, no. 21:46-52 (May 21, 1925); the first supplement appeared in PAPER TRADE JOURNAL 82, no. 20:49 (May 20, 1926); the second supplement in PAPER TRADE JOURNAL 84, no. 23; 45-46 (June 9, 1927); the third supplement in PAPER TRADE JOURNAL 86, no. 17:51-52 (Apr. 26, 1928); the fourth supplement in PAPER TRADE JOURNAL 88, no. 16:57 (April 18, 1929). Reprints of these lists may be secured by addressing the Paper Section, Bureau of Standards, Washington, D. C.

Carson, F. T. Critical study of methods of measuring the bulk of paper. Bureau of Standards Journal of Research 2, no. 6:1039-1056 (June, 1929). PAPER TRADE JOURNAL 89, no. 15:55-61 (Oct. 10, 1929). Bureau of Standards Research Paper No. 69. Price, 10 cents.

A study has been made of the means of measuring the property of paper known as bulk. The factors influencing bulk tests made with the thickness gage and the pressure bulker were investigated. It was found that the amount of pressure used is the chief factor. Conditions were found for bringing the different types of instruments into substantial agreement and a standard procedure was recommended.

Copies of publications issued by the Bureau of Standards may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C. for the prices named (cash required). The bureau usually receives a limited number of reprints of articles published in outside journals, and these are furnished by the Bureau free of charge.

Carson, F. T. Paper standards. PAPER TRADE JOURNAL 89, no. 16:57-58 (Oct. 17, 1929); Paper Mill 52, no. 44:22, 24-25 (Nov. 2, 1929).

The development of quality standards for paper and of means of measuring qualities of paper are discussed. Typical examples are given of the Bureau of Standards activities in this direction. The need of a better knowledge of the fundamental characteristics of paper, for adequate development of standards, is stressed.

Carson, F. T. and **Worthington, F. V.** Care and adjustment of folding testers of the Schopper type. Bureau of Standards, Circular No. 379. (Nov. 19, 1929). 7 p. Price, 5 cents.

Considerable attention is required to testers of the Schopper type for measuring the folding endurance of paper, since the folding results may be affected by relatively small changes in their adjustment. Poor alignment of the rollers between which the paper is folded or excessive friction in these rollers may produce serious error in the folding results. The bell-crank lever device for adjusting the spring tension, which was described in a previous publication, has been adapted to the measurement of the fraction of the rollers, and this procedure is here described. A procedure is outlined for the periodic inspection and adjustment of folding testers of the Schopper type.

Carson, F. T., and **Worthington, F. V.** Study of sheathing papers. Bureau of Standards Journal of Research 3, no. 1:75-89 (July 1, 1929). Bureau of Standards Research Paper No. 85. Price, 5 cents.

Thirty-six samples of sheathing paper were tested. Weight and thickness bear no definite relation to each other or to other properties except in papers of like structure. Thickness is no criterion of strength. Many of the heavier papers are comparatively weak. The papers differ greatly in strength retention after wetting. Less than a minute in some cases to several days in others were required for water to penetrate through the papers. Most of the papers were fairly impermeable to air, although some showed relatively large permeabilities. Relation of tests to service requirements is discussed.

Rasch, Royal H. Quality of purified wood fibers as a paper making material. Bureau of Standards Journal of Research 3, no. 3:469-506 (Sept., 1929). Preliminary publication in PAPER TRADE JOURNAL 88, no. 8:233, 235, 237, 239, 241, 243, 245, 247, 249, 251, 253, 255, 257, 259, 261, 263; discussion, 263-268 (Feb. 21, 1929); Paper Makers' Monthly Journal 67, no. 11:475 (Nov. 15, 1929); Papier 32, No. 5:519-522, 523-528, 531-533; no. 6:635-638; no. 7:741-744, 747-748; no. 8:969-970, 973-977 (May-Sept., 1929); Paper Making 48, no. 1:22 (Jan., 1929). Bureau of Standards Research Paper No. 107. Price, 15 cents.

The qualities of highly purified wood fibers and commercial papers prepared from these fibers are being investigated from the standpoint of chemical purity, color, durability and permanence; and compared with other typical papers and paper-making fibers. In order to simulate as closely as possible the deteriorating effects of natural aging, and thus determine the probable relative permanence of various types of papers and paper-making fibers; accelerated aging treatments are made and the effects measured. The results indicate that purified wood fibers are suitable for conversion into high-grade bond and permanent record papers, which have hitherto been made entirely from a high grade of rag fiber.

Scribner, B. W. Envelope paper qualities and their determination. The Envelope Industry 2, no. 10:12; 3, no. 1:9 (Dec. 1928; Mar., 1929).

This article was prepared more especially for the non-technical

[1] Chairman, Committee on Abstracts and Bibliography, TAPPI.
[2] Chief, Paper Section, Bureau of Standards.

reader. The requirements of mailing envelope papers in respect to both processing and service are discussed in detail. Simple methods of determining the paper qualities are described and references are given to information on more exact laboratory methods. The general qualities of envelope papers are indicated by the inclusion of government specifications.

Scribner, B. W. Historical sketch of the United States Bureau of Standards paper mill. Superior Facts (Paper Makers Chemical Corp., Holyoke, Mass.) 3, no. 2:7-9 (Aug., 1929).

This article gives a brief history of the Bureau of Standards paper mill from its establishment in 1910 to the year 1929. The development of the personnel, equipment, and paper-making research program is described, and examples of the outstanding accomplishments of the different development periods are cited.

Scribner, B. W. Paper activities of the Bureau of Standards. PAPER TRADE JOURNAL 89, no. 20:57-59 (Nov. 14, 1929); Paper Mill 52, 42; 2, 6, 8 (Oct. 19, 1929).

Contains a description of the general activities of the bureau as related to paper problems, and an outline of the work of the paper section on testing, testing methods, quality standards, and paper-making problems.

Scribner, B. W. Recent activities of the paper research laboratory of the Bureau of Standards. PAPER TRADE JOURNAL 88, no. 25:65-69 (June 20, 1929).

A general report of the paper section activities for the year. Information is given on the different branches of the work, which are testing, information service and research; on the personnel and equipment employed for these purposes; and on the cost of the work. A detailed resume of the various research accomplishments is included.

Scribner, B. W., and **Carson, F. T.** A study of fiber wall boards for developing specification standards. PAPER TRADE JOURNAL 89, no. 13:61-68 (Sept. 26, 1929).

This reports the results of a research made to assist in the formulation of purchase specifications for fiber wall board. A review is given of previous research by Clark and Conley which served as a basis for this further work. The experimental work done to develop an expansion test and a flexural strength test is described in detail, and the test results for the various kinds of commercial boards are given. Recommendations concerning the formulation of specifications are included.

Shaw, Merle B. Equipment and research work of the Bureau of Standards. PAPER TRADE JOURNAL 89, no. 19:60-63 (Nov. 7, 1929).

The laboratory and semi-commercial equipment used for study of paper making problems is described in detail and illustrated with photographs. The results obtained with the equipment are mentioned and current work is described briefly.

Shaw, Merle B., and **Bicking, George W.** Further experimental production of currency paper in the Bureau of Standards paper mill. Bureau of Standards Journal of Research 3, no. 3:899-926 (Dec., 1929). Bureau of Standards Research Paper No. 121. Price 15 cents.

The publication describes recent experimental tests to improve the durability of United States currency paper, and is supplementary to Technologic Paper No. 329, which reported the results obtained in earlier stages of the study. The subsequent work included the use of caustic soda as compared with lime for cooking the rags, the effect of variation in fiber composition, further study of the beating procedure, determination of optimum surface-sizing conditions for the best printing results, and comparative study of commercial manufacturing operations and bureau practice. As a result of the investigation, the strength of currency paper has been doubled, and paper of similar quality, superior in strength to any previously available, is being produced commercially. It is believed that the test data will be of value in the general technic of paper-making.

Shaw, Merle B., Bicking, George W., and **Streiter, O. G.** Experimental production of roofing felts. Bureau of Standards Journal of Research 2, no. 6:1001-1016 (June, 1929); PAPER TRADE JOURNAL 89, no. 9:44-48 (Aug. 29, 1929). Bureau of Standards Research Paper No. 67. Price 5 cents.

Experimental felts were made with varying proportions of the usual fibrous materials and with a high content of low-grade substitutes such as waste papers and sawdust. The waterleaf felts were made in the semi-commercial paper mill of the bureau but were saturated and coated, and thus converted into roofing, in a commercial roofing mill. The results indicate that relatively large amounts of the substitutes can be introduced into roofing felts without causing great difficulty in the manufacturing processes.

West, Clarence J., and **Scribner, B. W.** Paper Research literature, VII. A list of contributions by members of the U. S. Bureau of Standards, Department of Commerce, for 1928. (Fourth supplement). PAPER TRADE JOURNAL 88, no. 16:57 (Apr. 18, 1929).

National Aluminate Corp. Joins TAPPI

A company that has in recent years identified itself with the water purification problem of the pulp and paper industry has very appropriately associated itself with the Technical Association which was the pioneer organization in investigating the subject and showing the industry the way to its solution. This is the National Aluminate Corporation of Chicago, Ill., a company formed through the merger in 1928 of the Aluminate Sales Corporation and the Chicago Chemical Company, the product being a subsidiary of the Aluminum Company of America. Prior to the merger all of these companies had carried on considerable research work dealing with the use of sodium aluminate in water treating and other fields. They all had patents covering processes of manufacture and various uses of this chemical, all of which were brought under the control of one company and the supervision of the leading technical experts of the industry.

A plant is located at Clearing, Ill., for the liquid aluminates while the dry grades are made in the East St. Louis plant. In addition to the chemicals manufactured the company also makes certain mechanical devices for handling the chemicals or for the proper control of water treatment. Among these devices is a very sturdy chemical proportioner for feeding liquid sodium aluminate or other chemicals, a dry feeder especially adapted to the feeding of dry sodium aluminate, and a continuous blowdown device for blowing down steam boilers continuously so as to be able to control the concentrations of the boiler water accurately and easily, and at the same time recover the heat losses normally obtained with blowing down a steam boiler.

The principal uses of sodium aluminate now are in the water treating field, both in internal treatment and in lime-soda ash softeners. It is used for the manufacture of artificial zeolite to be used in zeolite type of softeners, used in the refining of corn syrup and cane sugar, is used for the clarification and softening of city water supplies and its use in the paper industry is being carefully studied.

TAPPI Notes

Benjamin von Weissenberg, formerly of the Dexter Sulphite Pulp and Paper Company of Dexter, N. Y., sailed on the *Europa* this week. He is to take the position of chief chemist in the new Government Mitscherlich Sulphite Mill at Veitsiluoto, Kemi, Finland.

R. E. Toucey, maintenance engineer for Crane & Co., Dalton, Mass., has become resident engineer for the George F. Hardy Company at Crocker-Burbank Company, Fitchburg, Mass.

Donald I. Gross, formerly research chemical engineer of the Industrial Fibre Company, Cleveland, Ohio, has joined the West Virginia Pulp and Paper Company organization at Covington, Va.

W. D. Mount, of Lynchburg, Va., has recently organized the Mount Chemical Equipment Company in that city to manufacture and sell vacuum filters, pulp washers, lime burning equipment, continuous causticizing apparatus, etc.

Effect of Sodium Sulphide-Sodium Hydroxide Ratio Upon Kraft Pulp Made From DouglasFir

By Robert Haring, Thor Hauff and W. L. Beuschlein[1]

This investigation was undertaken to determine some of the characteristics of Douglas Fir when treated by the sulphate process. The length of time for cooking and the liquor compositions were varied widely while other conditions were held as constant as the procedure would permit. Several cooks were made having the same cooking periods but varying liquor compositions and conversell, the period for cooking was varied while a common liquor was being used.

Wood Used

Commercial fir chips were obtained from the Everett Pulp and Paper Company, Everett, Wash. These chips were one-half to one and one-half inches in length. Charges of 2 kgms. each on the air dry basis were used.

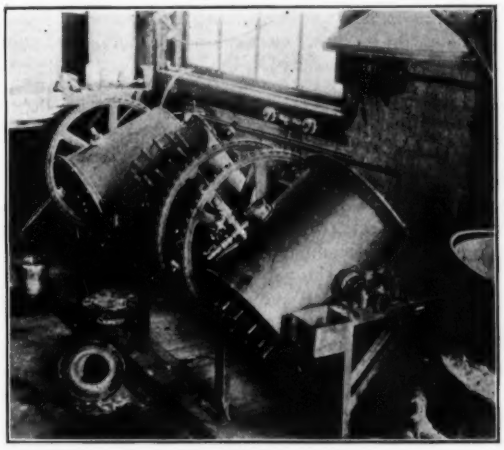


FIG. 1.

Liquor

The cooking liquor was made from sodium sulphide made in the laboratory, commercial sodium hydroxide and sodium carbonate. Each solution was analyzed, the proper amount calculated for a run, the mixture was made and analyzed again and reanalyzed after the final adjustments in concentrations were made. All liquors contained 32 grams of sodium carbonate per liter and since four liters of liquor were used per charge of 2000 grams of wood, 128 grams of sodium carbonate were used per charge. The amount of active alkali (Na_2O) per unit of wood was selected as 20 per cent of the weight of the air dried wood. The ratios of the sulphide to hydroxide were used such that the sulphide represented 10, 20, 30, 40, and 50 percent. of the active alkali and the hydroxide naturally was the complementary amount in each case. Hence all liquors contained roughly 380 grams of active alkali as Na_2O and 132 grams of Na_2CO_3 per charge of 4 liters.

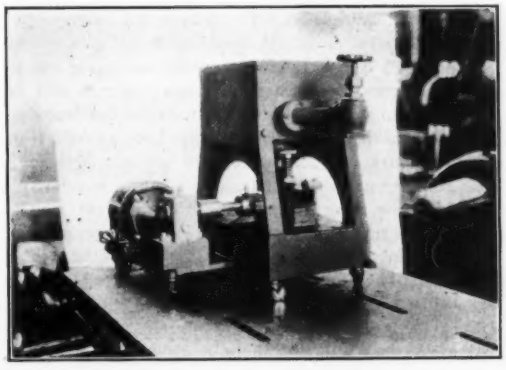


FIG. 2.

TABLE 1
ANALYSIS OF COOKING LIQUORS

Liquor	Total Alkali as Na_2O gms/4 liters	Na_2S as Na_2O gms/4 liters	NaOH as Na_2O gms/4 liters	Per cent Na_2S	Per cent NaOH
1	374.0	40.5	334.0	10.6	89.4
2	371.5	74.5	297.0	20.0	80.0
3	391.5	115.5	276.0	29.5	70.5
4	381.0	154.5	226.5	40.5	59.5
5	382.0	183.5	198.5	48.0	52.0

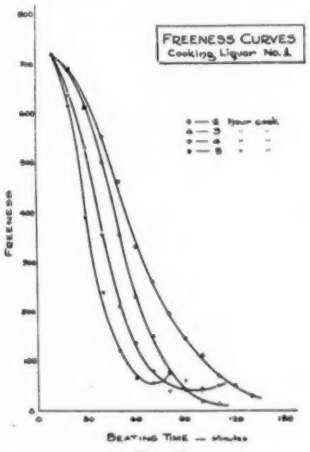


FIG. 3.

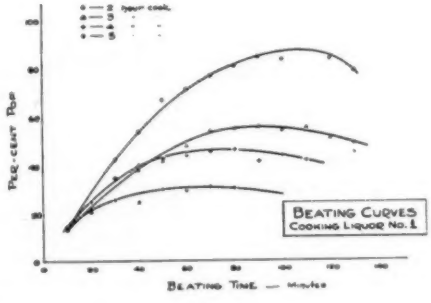


FIG. 5.

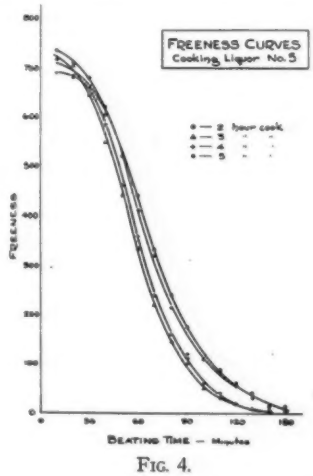


FIG. 4.

[1] Department of Chemical Engineering, University of Washington, Seattle, Wash.

Apparatus-Cooking Procedure and Testing of Pulp

Fig. 1 gives a view of the three digesters used. All cooks were made at 100 pounds gauge. The digesters were charged with 2 kgms. air dried chips, 4 liters of liquor added, the cover bolted and heating with agitation started. Three-quarters of an hour were used to bring the pressure to 100 pounds gauge. When that pressure was reached, a slight relief was allowed so that occluded air and gases could escape. The length of cooking time was measured from the time that the 100 mark was reached. Digester radiation and heat losses were such that 720 watts were sufficient to maintain an even temperature although an operator was at the digesters all the time. Cooks were ended by cutting off the heat, blowing down, and dumping the pulp. The pulp was washed in a Tolhurst laboratory centrifuge until free of black liquor, then screened in the Valley screen (Fig. 2.). The screened pulp was dried at 80 deg. C. and weighed on the bone dry basis.

Beating was carried on in a Valley beater at 1.75 per cent consistency, and at 25 deg. C. After thorough softening and mixing of pulp with water, the beater arm was lowered and beating begun. The Green slowness tester was used for the freeness tests.

The time of cooking was varied by one hour periods from two hours to five hours. Liquors were used which contained 10, 20, 30, 40 and 50 per cent of the total active alkali as sodium sulphide. All alkalinities are reported in terms of equivalent Na_2O. The data in graphic form shows the effect of cooking time upon freeness, beating time and maximum strength, all other conditions being constant. The effects of the sulphide-hydroxide ratio upon the freeness, beating time and maximum strength are also given. The yield of bone dry pulp was little effected by time of cook or composition of liquor although there was a small general increase in yield as the sulphide and time of cook increases. The minimum yields obtained with the two and three hour cooks using 10 and 20 per cent sulphide alkalinity were 42 per cent while the highest yields of 46 per cent were obtained from the 5 hour cooks with 50 per cent sulphide alkalinity.

Figs. 3 and 4 show graphically the range of freeness curves of the twenty cooks. In general it can be said that an increase in

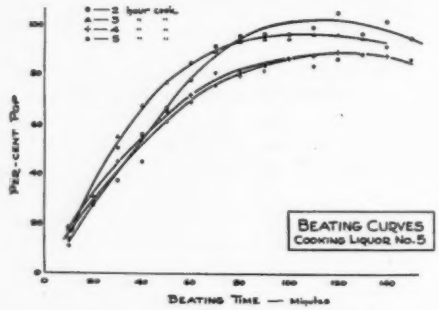


Fig. 6.

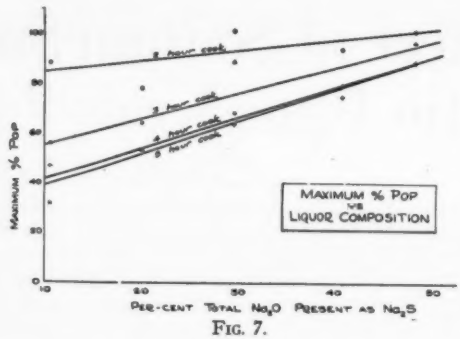


Fig. 7.

sulphide content has decreased the freeness at maximum pop, the low sulphide cooks having the greatest freeness. Table II gives the freeness at the maximum pops.

TABLE 2
FREENESS AT MAXIMUM POPS

Liquor No.	1	2	3	4	5
2 hr. cook	75	60	35	115	65
33 hr. cook	40	40	55	75	30
4 hr. cook	50	90	65	35	15
5 hr. cook	55	75	20	40	45

Figs. 5 and 6 show the range of beating curves for the twenty cooks. Cooking time effected the maximum values most in the runs wherein the liquors were low in sulphide. As the sulphide content increases, it is observed that the curves become more and more grouped together.

Fig. 13 gives the maximum pop strengths plotted versus the liquor percentages of sodium sulphide. This figure is rather interesting as all slopes are positive with that for the five hour cooks increasing the fastest and had a one hour cook been made, it would have been quite parallel to the base line and higher than the two hour experiment. As time increases during the cooks, say to three hours, and as the sulphide alkalinity becomes more and more effective, the cooking conditions become milder and the pulp stronger. Also a two hour cook with 10 per cent sulphide yields a pulp with a pop strength as high as one cooked with 50 per cent sulphide and left in the digester five hours.

Conclusions

While no sweeping conclusions can be made from this work, the following statements are indicative of the process:

1. Yields were effected but little by the time of cook and composition of the cooking liquor.
2. In general the freeness of the pulp at maximum pop strength varies inversely with the sulphide alkalinity, the cooks prepared with the highest sulphide alkalinity exhibiting the lowest freeness. As the length of cook increases, the freeness decreases.
3. For a given time of cooking the maximum pop strength increases with the sulphide alkalinity.

Electricity Aids the Mechanical Drive

By F. M. Roberts[1]

The application of the electric sectional drive to both fourdrinier and cylinder paper machines has made possible the investigation of power distribution on the machines. The economies which have resulted from the use of such drives have led many mill owners and operators to question the advisability of continuing the use of the older types of mechanical drives, particularly on cylinder machines where the unit drive is used for the wet end sections, including the first press, primary or baby presses and cylinder moulds.

On such machines it is customary, on a sectional electric drive, to use an individual motor for each baby press roll and cylinder mould and a separate motor on the first press roll. The life of the wet end felts is much increased with this arrangement because of the distributed driving force, which removes load from the first press, and from the felt.

In spite of the tempting economies realized with electric sectional drives, it is not always economical or advisable to scrap

[1] Industrial engineering department, General Electric Co., Schenectady, N. Y.

the mechanical equipment. However, the same advantage, insofar as the operation of the wet end felts is concerned, can be obtained by an arrangement recently developed by the General Electric Company for an eastern manufacturer operating a number of large board mills.

Each of the primary press rolls is provided with a geared direct-current motor rated 7½ horsepower, 1150 r.p.m., and each cylinder mold has a motor rated 3 horsepower, 1150 r.p.m. The first press is driven as before, through a mechanical clutch from the backline shaft.

The backline shaft drives a direct-current generator (Fig. 1.) which has constant field excitation and whose armature voltage varies as its speed. Thus the armature voltage of the generator varies directly as the speed of the paper machine, and hence the speed of the motors on the primary presses and cylinder molds also varies directly as the paper machine speed, since they too have constant excitation.

An electric limit switch is attached to the first press clutch lever mechanism. This switch controls the closing of the generator line contactor when the clutch is being engaged, and the opening of the line contactor when the lever is being moved to disengage the clutch. As soon as the line contactor closes, a definite time relay which controls resistance in the generator field circuit functions, cutting out the resistance and allowing the generator field to build up.

As field is applied to the generator, the voltage builds up and current is forced through the primary press and cylinder mold motor armatures, and each motor produces a driving torque. This torque relieves the first press clutch of the cylinder mold and primary press starting load, and reduces the strain in the felt which results from starting the entire wet end of the machine in the usual way from the first press clutch drive.

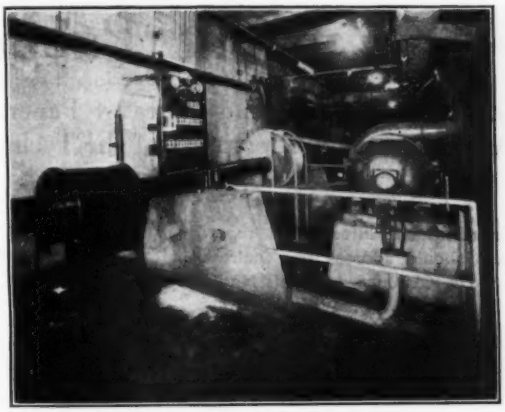


FIG. 1.

The limit switch attached to the first press clutch mechanism is designed for accurate adjustment of the time of closing of the generator line contactor, so that the motor torques are produced at the best time with respect to the operation of the mechanical clutch to provide for even acceleration of the wet end felt.

The direct-current generator and each of the motors are totally enclosed and separately ventilated. The ventilating air is furnished by a small auxiliary fan driven by an induction motor.

The economy of felt operation on this drive is already apparent. The wear and tear of the first press clutch is greatly reduced and the sheet formation is improved by relieving the felt strain at the cylinder molds.

Specifications for .009 Straw Board

By M. E. Curtis[1]

It is evident that there must be some yard stick for the manufacture of nine point strawboard for corrugation. Recent changes in the preparation of strawboard indicates that the box maker as well as the consumer desires a much stronger nine point strawboard corrugation.

Since no specifications are set directly by the box makers, are the manufacturers going to agree upon specifications and set up their own standards? There are many standard specifications that might be set up and adhered to as a code for the manufacture of nine point strawboard. Several may be listed as follows: 1. Definite crushing tests, 2. Tension and tearing tests, 3. Waterproofing tests; measured in seconds, 4. Moisture tests, 5. Standard weight per thousand square feet at a comparative caliper, 6. Finish, 7. Deterioration with age.

A decision must be made in the application of the crushing test. Shall the test be made on a single or a double-faced corrugation? What fair standard should be set for the crushing pressure exerted?

Tearing and tension tests should have a certain set standard figure that is fair to all manufacturers.

The water-proofing tests, a standard set time for sheet penetration by water, would be a protection and an assistance to the box maker in the application of silicate paste for facing.

Moisture specifications are in all probability set at present by the box maker. These specifications should be made universal in the production of nine point strawboard for corrugating.

Weight and caliper specifications should be very closely associated, not only from a standpoint of raw materials consumed, but from a standpoint of finish upon the sheet.

Deterioration is a factor which in most cases is overlooked, but the box maker is usually the one who suffers the consequences as he is the one who stores strawboard for future manufacture and sale. Strength tests should indicate that the board, after several months storage, retains a strength comparable to the day it was placed in storage. Warehouse conditions should be normal; however, there is a change in humidity from day to day which causes a destructive action, due to the residual alkalinity retained in the sheet if the process be of an alkaline nature. This is an important check upon the manufacturer of straw paper as his paper should be produced with a deterioration test in his method of production.

The consumer benefits in the same manner by an increased production created by a uniform product and by the elimination of waste due to the inability to utilize paper below specifications or paper so far above specifications that it is impossible to corrugate.

The effect of standard specifications can be realized also by the producers of the raw materials utilized in the manufacture of nine point strawboard. For example, the producers of chemicals, for the cooking and digesting process in the preparation of stuff, are working hand in hand with the manufacturers of nine point strawboard to prepare their chemicals to meet the demands of the industry.

There must be standards and specifications for a finished product or the resultant will approach the inferior quality stage without detection by the manufacturer.

For the assistance and guidance of the industry, the only practical thing left to do is to eliminate variables, maintain constants, and establish concrete standards and specifications.

[1] Engineer, Hagar Straw Board and Paper Co., Cedarville, Ohio.

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts and Bibliography of the Technical Association of the Pulp and Paper Industry

Clarence J. West, Chairman

For additional information regarding these abstracts subscribers should address the chairman of the Abstracts Committee, Dr. Clarence J. West, National Research Council, 21st and B Streets, Washington, D. C.

Paper Testing

Paper Tests. Roger C. Griffin. Arthur D. Little, Inc. Paper Mill 52, No. 7, 10, 12, (Feb. 16, 1929). An address briefly describing the chief tests which are applied to paper.—A. P.-C.

Expansion and Shrinkage of Paper Under the Influence of Atmospheric Humidity. Anon. Pulp Paper Mag. Can. 27, 309-310 (Feb. 28, 1929). A brief discussion of the influence of atmospheric humidity on the dimensions of paper, both sized and unsized.—A. P.-C.

Study of the Weller Brittleness Test for Paper. R. L. Peek, Jr., and J. M. Finch. Bell Telephone Laboratories, New York. Paper Trade J. 88, No. 6, 56-62 (Feb. 7, 1929). In this test a sample of paper 0.25 to 1 in. wide and about 6 in. long is bent over the edge of a steel plate ground to form the half circumference of a circle of about 0.005 in. radius. This plate forms the bar of a stirrup which is held in one jaw of a tensile testing machine, the two free ends of the sample being clamped together in the other jaw. The sample thus held is stretched by operating the testing machine in the usual way, and the load at which fracture occurs is noted. The difference between the load required to fracture a sample of the same dimensions in the ordinary tensile test and half the load required for fracture in the Weller test is supposed to be a measure of the brittleness of the paper, Bachman expressing this difference as a percentage of the load required for fracture in the tensile test and designating the results as per cent brittleness. In order that the best use may be made of the test in predicting the behavior in service of the material tested, the authors have made a theoretical and a mathematical analysis of the test and for this purpose have assumed an ideal structure for the paper, having properties which have been shown to be similar to those of paper. An equation is developed theoretically relating the properties of the idealized paper to the conditions of the test. The experimental results conform sufficiently to those theoretically predicted to indicate that the treatment relates the quantities measured by the test to the factors upon which they are principally dependent and thus makes possible an interpretation of the relationship involved, approximately correct in essentials, although many minor factors are concededly neglected. The complexity of the structure of paper suggests that any more accurate treatment would be exceedingly difficult, while the variability of the material is so great as to make it futile to attempt too precise a determination of any of its properties. —A. P.-C.

Paper Specialties

Stencil Sheet. A. DeWaele. Eng. pat. 278,445, July 8, 1926. A coating for stencil sheets for use on duplicating devices comprises a gelatinizing organic colloid such as gelatin dispersed in water and a tempering agent consisting of a hydroxy fatty acid ester of a monoor dihydric alcohol such as the ricinoleic esters of ethyleneglycol, trimethyleneglycol or ethyl alcohol. Substances such as bentonite, a titanium pigment and sulphonated sperm oil also may be added to the composition.—A. P.-C.

Machine for Making Paper for Loose-Leaf Ledgers. L. M. Yoerg assignor to American Writing Paper Co., Inc. U. S. pat. 1,695,448, Dec. 18, 1928. Pope's U. S. pat. 1,208,000, of Dec. 12, 1916, provides an apparatus and method for producing paper having a thinned portion or zone to adapt the paper for use in loose-leaf ledgers, so that the portion near the bound edge is more pliable and more readily adapted for bending when bound in the ledger. Paper made according to that patent has an unattractive finished appearance because of the sharp contrast of the thinned portion with the rest of the paper and because of noticeable defects resulting necessarily from the means employed according to the Pope patent. According to the present invention the appearance of the paper is improved by breaking up the contrast between the thinned portion and the rest of the sheet. This is accomplished by forming series of rather closely-spaced parallel grooves along the thinner portion of the sheet. These grooves or lines are made by rolls provided with narrow circular grooves which rest on the moist sheet on the paper machine wire, both the grooves and ribs of these rolls being covered with wire cloth. The rolls are preferably carried by arms which are pivoted about shaft of the deckle pulleys. When the paper machine is arranged to make one grade of paper only, these rolls may be dispensed with and the dandy roll may then be provided with strips of grooved wire cloth.—A. P.-C.

Wrapping Paper. Etablissements A. Poll & Cie. Belg. pat. 347,099, Jan. 31, 1928. Certain portions of the surface of the paper are waterproofed by means of paraffin or otherwise, while other portions are not waterproofed so as to allow of a certain ventilation of the wrapped goods.—A. P.-C.

Apparatus and Process for Glazing Paper. V. Antoine. Eng. pat. 297,098. Paper glazed and/or colored on one face is produced by distributing a liquid uniformly over one face of the paper when passing to a distributor roll situated in front of the pressure rolls. The water or colored liquid is fed under a constant head from a supply to a distributor which extends across the felt in front of the distributor roll to ensure the formation of a pool of liquid. A float valve is provided to maintain the supply automatically. If desired two reservoirs can be provided whereby two coloring liquids may be distributed over the paper. Size or other glazing material may be added to the water. The liquid may be distributed by a wick fed by a channel or by a perforated tube on which the wick is pressed by a bar.—A. P.-C.

Waterproof Paper Board. E. Bache assignor to Waldorf Paper Products Co. U. S. pat. 1,691,752, Nov. 13, 1928. A quantity of bitumen emulsion is prepared in which the emulsoid particles carry an electronegative charge, paper pulp is prepared carrying an electropositive charge on the fibers, and the emulsion and pulp are intimately mixed uniformly to distribute the bitumen upon the surface of the paper fibers.—A. P.-C.

Box-Board or Caddy Stock. J. M. Andrews assignor to Robert Gair Co. U. S. pat. 1,695,837, Dec. 18, 1928. The sheet comprises a layer of kraft, a layer of chip cemented to the layer of kraft by silicate of soda, a layer of news cemented to the layer of chip by silicate of soda, and a lining of hydrated highly calendered inelastic paper secured to the layer of news by flour paste having gum therein.—A. P.-C.

Multi-Ply Fiber Board. F. P. Wood assignor to Simplex Paper Cor. U. S. pat. 1,689,812, Oct. 30, 1928. Outer piles are

united with an intermediate ply which has been treated with water to expand the fibers and with a deliquescent substance such as glycerol serving to fix the fibers in expanded condition. A soap solution may be used.—A. P.-C.

Button Board. A. L. Clapp assignor to Beckwith Mfg. Co. U. S. pat. 1,683,605, Sept. 11, 1928. A material suitable for making buttons, sound records, etc., is made by disintegrating and beating waste paper, wood pulp or other suitable cellulosic material in water, together with a mechanically comminuted resinous gum such as rosin, shellac, copal or sandarac, and a suspension medium such as starch and lime and forming the resultant pulp into shape, e.g., by heat and pressure.—A. P.-C.

Synthetic Resin Fiber Board. A. L. Clapp. U. S. pat. 1,684,755, Sept. 18, 1928. Wood flour and a pulverized synthetic resin are incorporated into an aqueous cellulosic pulp, the pulp is made into sheets and the latter are subjected to heat and pressure.—A. P.-C.

Fire Resisting Fiber Board. Charles A. Upson. U. S. pat. 1,687,599, Oct. 16, 1928. Webs of vegetable fiber pulp of relatively high tensile strength and of mineral fiber pulp of lower tensile strength are united immediately after their formation and while saturated to form a composite board, the fibers of which are interlaced with one another.—A. P.-C.

Carbon Papers. B. Stockel and M. von Tenspolde. Eng. pat. 297,309. In renovating carbon paper by heat, mechanical rubbing of the carbon surface is dispensed with and the process is preferably performed at temperatures of from 60° to 80°C. A suitable apparatus consists of an electrically heated cylinder secured to a sloping base, the carbon paper being passed under a spring-pressed roller and being drawn by hand over the cylinder. The latter may consist of metal and contain a spiral heating element arranged between asbestos sleeves, or the heating element may be embedded in a glass or porcelain cylinder. The heating element is provided with temperature regulating means.—A. P.-C.

Preparation of Paper Surface. H. C. Mitchell. Eng. pat. 300,303, Aug. 10, 1927. Paper, cardboard, etc., is coated with a layer of plain or colored paraffin wax or shellac which is subsequently "fixed" by heating, so that portions may be removed by writing or scraping with a style, etc.—A. P.-C.

Production of Stencil Sheets for Use in Duplicating. A. DeWaele. Eng. pat. 298,705, July 22, 1927. In the manufacture of stencil sheets by coating Yoshino paper with gelatinising organic colloids, e.g., nitrocellulose, the use of large quantities of organic solvents is avoided by applying the coating in the form of an aqueous emulsion. To prepare the emulsion, collodion cotton, in admixture with a softening agent, e.g., castor oil, is treated with sufficient amyl acetate to give a stiff jelly, and this is beaten in a colloid mill with water containing about 10 per cent on the weight of the nitrocellulose of gelatin or agar. Emulsifying agents such as sulphonated sperm oil or ammonium salts of ricinoleic acid may be used, and bentonite may be added to stabilize the emulsion.—A. P.-C.

Waterproof Sheet Structure. J. F. White assignor to White Products Co. U. S. pat. 1,694,523, Dec. 11, 1928. The patent covers the process of forming structural board which comprises disposing flexible non-adhesive surfacing sheets upon opposite non-adhesive surfaces of a flexible sheet of felt having an impregnation of adhesive water-repellent material, then compressing the sheets together and applying heat to compact the felt and express water-repellent material therefrom into the surfacing sheets to form a uniting bond and water-resisting filler.—A. P.-C.

Apparatus for Making Prepared Roofing. W. T. Hofmann assignor to The Flintkote Co. U. S. pat. 1,697,464, Jan. 1, 1929. On emerging from the coating bath the roofing is passed between squeeze rolls to distribute the coating evenly over the sheet. At regular intervals across the surface of the sheet are air tubes connected to a common header supplied with compressed air. Each tube has a narrow flat mouth on the bottom of which is attached a flexible scraper with an upturned end projecting beyond the nip of the rolls. These flat bands or scrapers are set to firmly contact with the sheet as it passes between the rolls. There is thus formed in the coated sheet a straight, regular, banded design, as the surfacing material added after the sheet passes the rolls does not adhere to the grooved portions. When the sheet is cut into strips and laid upon a roof, it has the appearance of shingles.—A. P.-C.

Apparatus for Drying Processed Roofing or Flooring Papers. W. Freegard assignor to The Barber Asphalt Co. U. S. pat. 1,701,878, Feb. 12, 1929. The freshly coated or painted material is passed in loop formation through a casing where it is positively driven throughout practically the full length of its path, the driving means coming in contact only with the back of the sheet. Instead of being carried on travelling sticks, the tops of the loops are carried by fixed rotating rolls. Vertically below each of the upper rolls is a smaller roll, and each pair of rolls is joined by a series of narrow belts, the upper rolls being grooved to such a depth that the outer belt surfaces and roll faces are flush for uninterrupted contact with the sheet. Adjacent pairs of the lower rolls are similarly connected by narrow horizontal belts. Inside each loop is a series of slotted horizontal pipes through which compressed air is blown on the surface of the sheet thus hastening the drying and at the same time holding it against the narrow belts so as to positively drive it through the apparatus.—A. P.-C.

Insulating Board. D. Finley assignor to The Paraffine Companies, Inc. U. S. pat. 1,685,320, Sept. 25, 1928. The board is composed of a double-faced corrugated board, with a filler between the facing sheets and across the furrows of the corrugated sheet.—A. P.-C.

Creping Paper. D. W. Hudson. U. S. pat. 1,690,411, Nov. 6, 1928. The paper is passed between a pair of feed rolls with each of which is associated a creping blade. The edges of the blades are offset in the direction of advance of the web and the space between the blades is intersected by the common tangent of the rolls at the point at which the web enters the space between the rolls.—A. P.-C.

Safety Paper. B. W. Smith assignor to The Todd Co., Inc. U. S. pat. 1,689,302, Oct. 30, 1928. The paper has an inherently warning character printed upon it in indelible ink adapted to have its color conspicuously altered by reaction with chemical eradicators. Additional matter is added to camouflage the warning characters and to obscure them until they are rendered conspicuous by the application of the eradicators.—A. P.-C.

Folded Crepe Products. W. H. Cannard. U. S. pat. 1,692,720, Nov. 20, 1928. The process comprises the steps of spreading the web, moistening the spread web, subjecting the moist web to pressure against one of its surfaces to transversely narrow it, subjecting the web to pressure upon both surfaces to corrugate and further narrow it, subjecting portions of the web to unequal pressure to emboss it, drying the moist web, severing the web into sheets and folding the individual sheets.—A. P.-C.

Waterproofing and Coating Paper. A. Jeremias. Eng. pat. 286,396, Dec. 20, 1926. An emulsion of rubber, collodion or other suitable material insoluble in water is applied as a coating, and the material in the coating is then converted into insoluble form by a fixing agent, e.g., a metal salt such as alum, aluminum acetate or chrome alum.—A. P.-C.

Process for the Manufacture of Waterproof Abrasive Paper. Carl A. Klein and Robert S. Brown. U. S. pats. 1,687,453 and 1,687,454, Oct. 9, 1928. *No. 1,687,453.*—A base material such as paper or cloth is waterproofed by passing it through a bath of linseed oil containing a small proportion of paraffin or other suitable wax and maintained at a temperature of 100°C. or higher; any surplus waterproofing material is removed by heated pressure rolls, an adhesive consisting of a drying oil

such as linseed or tung oil and a varnish gum or synthetic resin is then applied, followed by successive application of abrasive material (all these operations also being carried out at temperatures above 100°C). *No. 1,687,454*—A similar preliminary waterproofing treatment is given, followed by application of an adhesive comprising a drying oil and a gum such as dammar or copal and of abrasive material.—A. P.-C.

Process and Apparatus for Applying Synthetic Resins, or Similar Products, to Paper Without the Use of Alcohol or Other Volatile Solvents. Fibre et Mica. French pat. 608,793, April 30, 1926. Insulating paper is prepared by using the cold, viscous product obtained at an intermediate stage in the manufacture of solid synthetic resins, when it has a specific gravity at 20°C. of about 1.2, moisture content of 12 per cent and free phenol content of 10 per cent. After application of the product to the sheet, it is brought to the desired thickness by calendering, and it is then dryed by known methods.—A. P.-C.

Device for Grooving Plane or Corrugated Boards. Aktiengesellschaft für Caronnagen-industrie. Fr. pat. 646,339, Dec. 24, 1927; Belg. pat. 347,532, Jan. 31, 1928. The grooves are formed by passing through an apparatus consisting of three blades. The blades constitute a channel through which the board is forced, and are thus comparable to the dies used in drawing metallic wires, as the passage formed by the blades is progressively reduced. The advantage over the usual corrugating rolls lies in the fact that the length of the passage may be as long as desired, thus avoiding the excessive strains set up in the board by the use of corrugating rolls, unless the latter are of an excessive size.—A. P.-C.

Increasing the Elasticity and Shrinkability of Paper. D. Genese. U. S. pat. 1,690,631, Nov. 6, 1928. Paper is moistened with a solution of boric acid and dried under heat and pressure. —A. P.-C.

Machine for Making Elastic Paper. Wm. A. Lorenz assignor to The Otaka Fabric Co. U. S. pat. 1,701,685, Feb. 12, 1929. The moist paper is delivered to a circumferentially grooved roll, which delivers it to a second roll having corrugations meshing with those of the first roll. If desired, a supplemental corrugating roll may be provided to co-act with the second roll for completing the corrugating operation. The second corrugating roll then carries the longitudinally corrugated paper to a crinkling roll which rotates in the same direction as, but at a slower speed than, the corrugating roll so as to effect the crinkling operation. The crinkling roll has corrugations meshing with those of the corrugating roll, and the circumferential ribs are interrupted so as to form series of teeth, the forward faces of which are preferably inclined and the rear faces radially disposed. In order to prevent the paper from sticking to the rolls and winding around them, each of the rolls is provided with a "pick-off roll," each of which is generally similar in construction to the crinkling roll except that the leading face of each tooth is preferably radial and the rear face inclined. The "pick-off rolls" are driven in the same direction as, but at a considerably higher speed than the cylinders with which they are associated. In order to automatically clean the cylinders and "pick-off rolls" scrapers bars are provided, and preferably placed at the throat between the cylinders and their respective "pick-off rolls." The second corrugating roll is mounted in fixed bearings, while the first corrugating roll and the crinkling roll are mounted on pivoted levers, and the extent to which their corrugations mesh with those of the second roll is adjustable.—A. P.-C.

Apparatus for the Manufacture of Mica-Coated Insulating Paper. E. Haefely. U. S. pat. 1,696,397, Dec. 25, 1929. An endless conveyor, e.g., a linen belt, is covered with mica scales. It is then brought into contact with the web of paper to be coated, to which has been previously applied a suitable binder, and the two are passed under a heated press roll which causes the mica to become embedded in and adhere to the binder on the paper. On separating the linen belt from the mica-coated paper, the excess mica drops into a suitable container and can be reused.—A. P.-C.

Water-Resistant and Thermoplastic Paper Product. British Celanese, Ltd. Eng. pat. 301,428. Paper, sheets, boards, or laminated products are prepared from paper pulp by mixing a derivative of cellulose, preferably in the form of fibers, with the stock in a pulp beater, forming the product into sheets and fixing the cellulose derivative therein, the resultant material being water resistant and thermoplastic. High boiling solvents, plasticizers or softeners may also be added to the stock. The cellulose derivative is fixed by subjecting the sheets, after removal of excess water, to the action of high-pressure, heated rolls, or by applying a solvent for the derivative by brushing, spraying, dipping or otherwise coating and then evaporating the solvent. A number of sheets may be hot-pressed together to form a laminated product. The paper may be formed in the usual manner on a fourdrinier machine; while in forming leather board the pulp is collected by suction on the surface of a revolving perforated cylinder, the layer slit, removed therefrom and dried.—A. P.-C.

Raw Material

New Materials for the Manufacture of Artificial Silk. Anon. Bull. Imp. Inst. 27, 1-9 (April 1929). Results are given of an investigation into the suitability of bagasse, sulphite pulp from Tasmanian stringybark, and Phormium tenax fiber as sources of cellulose for rayon. Bagasse from Trinidad in the form of fibrous chips and crushed cane in pieces of irregular size up to 5 inches in length contained 10.8 per cent water, 1.2 per cent ash and 51.2 per cent cellulose (57.4 per cent on the dry basis). The fiber length was 0.6 to 5.0 mm. (average 1.95) and the fiber diameter was 0.0152 to 0.0508 mm. (av. 0.0264). Cooking 3 hrs. at 140° C. with 20 per cent of caustic soda at a concentration of 3 per cent yielded 48 per cent of unbleached pulp, which furnished a pale grayish-brown paper of excellent strength, containing a number of noticeable fibrous specks, probably derived from the nodes of the cane. With a light bleaching treatment, the yield was reduced to 40 per cent (on the original material) of pulp which furnished a very pale cream-colored paper of similar character and strength to the unbleached paper; the small specks were only partially affected by the bleaching treatment. The paper in both cases exhibited the "rattly" character of paper produced from fibrous material containing pithy matter. By mechanical separation of the pith from the fibrous material, it would no doubt be possible to produce paper of very good quality. Cooking as above after removal of 33 per cent of pithy material by mechanical treatment yielded approximately 29 per cent (43.5 per cent on the mechanically treated material) of pulp containing 0.22 per cent ash and 17.75 per cent alpha-cellulose. Pulp of satisfactory quality for rayon manufacture was obtained by first freeing the air-dried bagasse as far as possible from pith by rubbing and sieving and then treating the material to a preliminary process of fractional digestion as follows: (a) Boiled with water with continuous agitation and then filtered through a coarse sieve; the operation was repeated; this removed starches, sugars, soluble gums and other water-soluble matter, together with some more finely-divided pith. (b) Boiled with 1 per cent caustic soda; the pithy matter attached to the fibers swelled and could be fairly readily separated by agitation; this operation was repeated and removed resins, fats, waxes, etc., together with pectose. (c) A further washing in water was given and the material finally freed from almost the whole of the remainder of the pith by a light beating in the hollander. Cooking under the previously stated conditions yielded 68 per cent of dry bleached pulp on the dry prepared material (approximately 26 per cent on the dry original bagasse) which gave the following results on analysis: H_2O 7.7, ash 0.14, alpha-cellulose 86.1, beta-cellulose 12.6, gamma-cellulose 1.3 per cent, copper number (by Braidy's method) 0.56, phloroglucinol absorption 1.19 per cent, soda absorption values 215,

acetone extract 0.26 per cent. Bleached sulphite pulp prepared in Australia from Tasmanian stringy-balk had the following composition on the dry basis: ash 0.32 per cent, alpha-cellulose 88.6 per cent, acetone extract 0.44 per cent, copper number (by Brady's method) 1.9, which indicates it would be suitable for rayon manufacture. Phormium tenax fiber from New Zealand cooked under the previously stated conditions gave a 70.5 per cent yield of dry bleached pulp (on dry fiber) which gave: ash 0.09 per cent, alpha-cellulose 89.8 per cent, beta-cellulose 7.0 per cent, gamma-cellulose 3.1 per cent, acetone extract 0.12 per cent, copper number 0.824. The composition of the pulp compares very favorably with that of bleached sulphite wood pulp commonly used for rayon manufacture; but it seems doubtful whether it could compete with wood pulp owing to the value of phormium tow for other purposes. A. P.-C.

Preparation of a Residue Suitable for Making Pulp in the Extraction of Rosin and Turpentine from Wood. A. A. Shimer assignor to Hercules Power Co. U. S. pat. 1,696,696, Dec. 25, 1928. In extracting resinous products from resinous wood and preparing a residue suitable for paper pulp, the wood is disintegrated and crushed to form thin flattened pieces without tearing and destroying the fiber; it may then be treated with steam and then with gasoline.—A. P.-C.

Paper Making Qualities of Pinus Hamiltoni (Corte's Pino Maritimo). Ignacio Echeverria and Siméon de Pedro. Bull. Inst. Pin No. 57, 55-57 (Feb. 1929). This is a variety of *Pinus maritimus.* The average of 4 analyses gave: water 59.60 per cent, alcohol-ether extract 0.688 per cent (1.699 per cent on the dry basis), cellulose 21.55 per cent (53.36 per cent on the dry basis). Cooking 2 kilos of wood for 14 hrs. at a pressure of 4 kilos per sq. cm. with 400 g. of sodium hydroxide and 200 6. of sodium sulphide in 8 l. of water gave a 23 per cent yield of hard pulp which was difficult to bleach. The fiber length was 3 mm. and fiber diameter 0.045 mm.—A. P.-C.

Pine Wood for Paper Making. J. A. Porphyre. Bull. Inst. Pin No. 57, 82-84 (Feb. 1929). A brief discussion of the advantages of the production of groundwood and news print in the Landes region (France) from maritime pine.—A. P.-C.

Chemical Examination of the Tissue of the Corn Stalk. C. J. Peterson and R. M. Hixon. Iowa State College, Ames, Iowa. Ind. Eng. Chem. (Analyt. Edit.) 1, 65-67 (April 15, 1929). An analytical examination of the corn stalk indicates that it consists primarily of approximately 30 per cent lignin, 27 per cent pentosan and 36 per cent cellulose. There is little polyhexose material subject to acid hydrolysis (2 to 6 per cent) and no pectic material could be definitely identified. Directions are given for the isolation from the corn stalk by alkali extraction of pentosan fraction (with about 25 per cent impurity as ash and lignin) and of a lignin fraction (apparently containing no carbohydrates). The shell, pith and vascular bundles were dissected from the corn stalk and analyzed, and the composition of the individual tissues were found not to vary greatly from that of the total stalk. The cellulose pulp prepared from the pith dries to a parchment-like paper. —A. P.-C.

Adsorption of Gases and Vapors by Wood. Lloyd M. Pidgeon, McGill University, Montreal. Pulp Paper Mag. Can. International No. 344 (Feb. 1929). The large mass of the gas contained in the wood was found to have the same composition as air, and to be simply filling the cavities; the portion of gas obtained after the gas filling the cavities has been removed is actually adsorbed on the walls of the wood structure and has not the same composition as air, that is, it is selectively adsorbed. The adsorption of vapors was studied by means of a quartz spring balance which permitted of measuring differences in weight on a 0.15-g. sample to an accuracy of 0.3 per cent. The equilibrium values throughout a wide range of temperature for vapor pressures ranging from 0.1 mm. to the saturation value have been measured. At high temperatures the equilibrium value is completely reversible, while at low temperature an apparent hysteresis is noticed; that is most pronounced when the sample has been subjected to excessive drying, but even then a truly reversible value may be obtained. —A.P.-C.

Penetration of Wood by Liquids. H. Wyatt Johnston. McGill University, Montreal. Pulp Paper Mag. Can. International No. 342-344 (Feb. 1929). The work was done chiefly on jack pine, in thin sections 0.25 to 0.5 inch. thick. Dry wood is more penetrable than wet green wood, but the tendency is to reach equilibrium rapidly, at about the same values, wood being fairly reversible in this respect. Almost no flow was observed in tangential directions, and but little in the radial directions, except in sapwood which is very permeable in all directions; for practical purposes only longitudinal flow is important. Flow decreases with increasing thickness. Water penetrates wood with little permanent change after the first few portions have gone through. Neutral sulphites facilitate penetration, but the original value is restored when water is run through afterward. Acid sulphites especially with much free sulphur dioxide, enter less readily than neutral sulphites, but leave the sample with a much more rapid rate for pure water and a visible alteration in structure characteristic of a partially cooked chip; prolonged treatment would disintegrate the fibers. Flow increases with increasing temperature and with increasing pressure; the rate of increase with pressure follows the well known formulae for turbulent flow in pipes, not viscous flow as might be expected. The rate of penetration tends to decrease with time to a well marked minimum. It is suggested that the mechanism of the bordered pits tends to produce turbulence and loss of static head owing to sudden expansion of ten times or more in sectional area.—A. P.-C.

Paper Making Value of Wild Rice (Zizania Latifolia). F. Heim de Balsac, H. Heim de Balsac and A. Deforge. Chimie et Industrie Special No. 580-582 (Feb. 1929). Wild rice straw, consisting of leaves and sheathes and containing no nodes, on cooking 4.5 hours under a pressure of 3 kilos per sq. cm. with a 4° Bé. caustic soda liquor (28 g. per l.) gave a light brown pulp which bleached readily with sodium hypochlorite solution, the combined yield of unbleached and bleached pulps (in approximately equal amounts) being 38.8 per cent. The paper made from the pulp had fairly good tensile strength, rather poor tearing resistance and medium folding resistance. The unbleached and bleached pulps contained on the dry basis (moisture 6.70 and 6.61 per cent, respectively): ash 6.87 per cent, 4. 88 per cent; cellulose 74.25 per cent, 90.10 per cent, furfural (on the cellulose content) 3.45 per cent, 1.66 per cent, methoxycellulose present; lignin 18.88 per cent, 5.02 per cent. The composition of the ash was: silica 5.15 per cent, 3.80 per cent; alumina 4.40 per cent, 2.65 per cent; lime 90.45 per cent, 93.55. Wild rice straw soda pulp is considered suitable for paper making for the same uses as ordinary rice straw soda pulp.—A. P.-C.

Science and Cellulose. Wilder D. Bancroft. Cornell University. Pulp Paper Mag. Can. International No. 283-286 (Feb. 1929). An address.—A. P.-C.

Reworking Used Paper. Joseph O. Pierce and Warren T. Reddish assignors to Twitchell Process Co. U. S. pat. 1,703,830, Feb. 26, 1929. Used paper is repulped, foreign matter is separated by use of a mineral-oil sulphonic reagent, the pulp is washed and then used for making new paper.—A. P.-C.

De-Inking Paper. Harry C. Fisher assignor to The Richardson Co. U. S. pat. 1,707,604, April 2, 1929. In order to remove ink from fibrous pulp, the latter is soaked in a solution of alkali such as sodium carbonate to loosen the inky matter; it is then agitated with benzene or other suitable volatile liquid immiscible with water to form an emulsion containing the inky matter; the volatile liquid is then vaporized, which causes the inky matter to float on the surface of the solution when it can be removed by skimming.—A. P.-C.

Modified Washing System for old Papers. W. K. Kidder, Paper Mill 52, No. 12, 20-23 (March 23, 1929); Pulp Paper Mag. Can. 27, 531-533 (April 11, 1929). The following system is operat-

ing successfully, at a decrease in cost over the usual process, and is giving cleaner, brighter stock; the stock is sorted, dusted, run through a hog, blown into the cookers where it is cooked about 3.5 hours with 3 per cent of caustic soda, the cookers being provided with agitators and with a centrifugal pump to ensure circulation; the cooked stock is dumped into a storage tank equipped with agitators, passed into a discarded stock washer of the hollander type where water is added to bring it to the required consistency, pumped to a metering box whence it flows by gravity into a series of riffle boxes where pins, paper clips, rubber, etc., settle out, then to flat screens where the final screening takes place, and to a thickener consisting of a rectangular screen 30 feet long by 12 feet wide, set at an angle of 45° and covered with fourdrinier wire; the thickened stock is washed by passing through a conical cylinder 25 feet long, 4 feet in diameter at the inlet and 6 feet in diameter at the discharge end, covered with 80-mesh wire and revolving at 4 r.p.m., the whole of the ink being removed in approximately 20 min. required for the stock to pass through the cylinder; the washed stock passes to a bleaching tank where it is mixed with bleach containing about 18 g. per l. of available chlorine, requires about 3 to 4 hrs. to pass through the tank, coming out at the desired color and brightness, is washed and finally sent to the beater storage chest.—A. P.-C.

Comments on the Design and Operation of Paper Pulp Plants. E. G. Milham. Bryant Paper Co., Kalamazoo Paper Co., Kalamazoo, Mich. Paper Mill 52, No. 11, 5, 6, 10, 12 (March 16, 1929). A general discussion of the working up of waste paper stock, discussing the relative advantages and disadvantages of various methods of procedure.—A. P.-C.

Recovery of Bast from Plant Stalks. Ernst Heimlich. Ger. pat. 470,504. The stalks are forced longitudinally against a fixed knife, and thus halved. The halved stalks are then passed across rapidly revolving rolls the surfaces of which are so designed as to effect efficient removal of the pith, and the cleaned bast shell is partially crushed.—R. H. D.

Production of Textile Fibers and Fibrous Pulp from Fibrous Husks Such as Cocoa. Emil Claviez. Ger. pat. 469,393, April 12, 1925. The husks are subjected to a grinding process such as is used in the production of mechanical pulp.—R. H. D.

Cellulose

The Reaction of Cellulose with Phenylhydrazine Acetate. C. J. Staud and H. LeB. Gray. Eastman Kodak Co., Rochester, N. Y. Ind. Eng. Chem. (Analyt. Edit.) 1, 80-81 April 15, 1929). The method described by Vignon Compt. Rend. Acad. Sci. 128, 579 (1899); Bull. Soc. Chim. France (3), 21, 60 (1899) for determining the reaction of cellulose and phenylhydrazine acetate was modified by removing the bulk of the excess of phenylhydrazine acetate by washing with 50 to 100 cc. of 95 per cent alcohol and then eliminating the remainder by extracting in a Soxhlet with 95 per cent alcohol for 4 to 9 hrs. The nitrogen content of various cellulose materials after phenylhydrazine treatment was compared with the copper number of the same cellulose materials with the following results: sulphite pulp treated with nitric acid 0.73, 0.42; hydrocellulose A 0.08, 2.15; hydrocellulose B 0.23, 2.10; crude linters treated with hot 1 per cent caustic soda followed by nitric acid 0.40, 6.33; linters which were mercerized and then treated with nitric acid 0.52, 13.84; hydrocellulose C 0.19, 4.12; hydrocellulose D 0.23, 3.17; crude linters treated with 1 per cent caustic soda 0.03, 0.021; standard cellulose 0.04, 0.005. There appears to be a general trend of agreement in that high copper numbers are associated with high nitrogen content. In another paper Gray and Staud (Ind. Eng. Chem.) 19, 854 (1927) have shown that the copper number of cellulose depends to a great extent on the character of the surface of the material upon which the copper number is determined. This may account for some of the apparent failure in correspondence between copper number and nitrogen content. In the same paper data are given which indicate that alkali has the property of destroying or converting to an inactive form the reducing substances in cellulose which give rise to the copper number. Altogether, it is considered that the results obtained by the action of phenylhydrazine acetate on cellulose appear more trustworthy than the copper number values.—A. P.-C.

Future Possibilities in the Utilization of Cellulose. Charles H. Herty. Paper Mill 52, No. 11, 22-26, 34 (March 16, 1929). An address.—A. P.-C.

Alkali-Soluble Components of Sulphite Pulp and Artificial Silk. W. Weltzein. Russia 4, 367-373 (March 1929).—The procedure used was to soak 0.5 g. of pulp in 30 cc. of caustic soda solution for 3 hrs., filter, wash 3 times with caustic soda, treat with hydrochloric acid, wash, dry and weigh. Increase of time up to 30 hrs. generally showed no significant increase of soluble material. The maximum solubility of pulps is in caustic soda of about 10 per cent concentration. As the time of treatment is increased, the maximum approaches 10 per cent concentration more closely. The decrease in solubility in concentrations above 10 per cent may be due to mass action effects. Artificial silk prepared in different ways shows a similar, much greater, maximum solubility. Nitrate silk is entirely dissolved in 10 per cent caustic soda. The colloid system "artificial silk," is distinguished from the system "pulp" by a relatively lower solubility in dilute and concentrated alkali and much greater solubility in 10 per cent alkali. The experimental curves are reproducible; it has been possible to identify an unknown pulp sample in this way. It is suggested that cellulose esters could most readily be studied or identified by determining the alkali solubility of the cellulose regenerated from them.—A. P.-C.

Alpha-Cellulose. J. H. Ross and J. S. G. Shotwell. Forest Products Laboratories of Canada, Montreal. Pulp Paper Mag. Can. 27, 379-382, 396-397 (March 14), 431-434, 454 (March 21, 1929). From a review of the literature (with bibliography of 29 references) and an investigation into the effect of variations in the conditions under which the alhpa-cellulose determination is carried out, it was found that the amount of substance extracted from a pulp by caustic soda solutions varies with the temperature of extraction, the ratio of solution to pulp, the concentration of the solution and the time. The following method was evolved, and found suitable as a routine method as it gives closely agreeing results in the hands of different operators: macerate 3.5 g. of air-dried bleached pulp in 70 cc. of 17.5 per cent caustic soda solution at 20° C., mercerize for two hours, throw on a Buchner funnel and pass the filtrate repeatedly till all the fiber is held, suck as dry as possible, suspend the pot in 100 cc. of 17.5 per cent caustic soda solution at 20° C. for 30 seconds stirring well, filter as before, suspend in 200 cc. of 25 per cent acetic acid, bring to a boil filter, wash on the filter with 1 l. of boiling water and dry to constant weight of 100° to 105° C.—A. P.-C.

Swelling, Salt Formation and Micro-Structure of the Cellulose Fiber. C. Trogus, Papier-Fabr. 27, 55-60 (1929).—A discussion, with illustrations and numerous references, of the results of X-ray, microscopic, and adsorption studies on normal and mercerized cotton cellulose and on artificial fibers. The native fiber is made up of layers so arranged that when it swells radially it must shrink longitudinally. In the artificial fiber this special structure is not present, and the fibers actually lengthen somewhat on swelling. Cellulose also undergoes a deep-seated, though not complete, change in fibrous structure upon mercerization.—R. H. D.

The Determination of Alpha- and Beta-Celluloses. Ragnar Bergqvist. Papier-Fabr. 27, 119-23 (1929). Experience with the Jentgen method indicates that this should not be considered as one affected by large exptl. errors; by proper and careful manipulation results checking within 0.1 per cent should be consistently obtained. Representative data are cited leading to the following recommendations: (1) A sample of 10 g. should be used, as this will be more truly representative than a smaller one; weighings should be carefully made, and the drying oven accurately controlled. (2) The mercerization should be carried out a 20° C.;

if a thermostat is not available, a correction of 0.1 per cent per degree should be applied to the alpha value, being substracted if the temp. is above 20° or added if it is below this value. The same correction applies in the opposite sense to the beta value; the gamma value is independent of the temperature. The wash water in any case should be kept close to 20°. (3) The amt. of water used for diln. should be kept const. at 300 cc. (4) Filtration must be begun at once after diln., and completed as rapidly as possible; by using a linen cloth filter in a Buchner funnel filtration and washing may be completed in 5 to 10 minutes. (5) Mechanical treatment (kneading of fiber with mercerizing soln.) should be brief, not exceeding 5 min. Immediate and rapid filtration and washing is by far the most important single factor. Thus parallel samples were treated with 50 cc. and 200 cc. of mercerizing soln. When treated at under (4), the alpha values were resp. 87.36 and 87.30 per cent, while when a 5 min. interval intervened between diln. and filtration they were 87.58 and 86.32 per cent.—R. H. D.

Lignin

Determination of Lignin by Means of Formaldehyde and Sulphuric Acid. J. H. Ross and A. C. Hill. Forest Products Laboratories of Canada, Montreal. Pulp Paper Mag. Can. 27, 541-544 (April 11, 1929).—The method depends on the fact that all ligneuos tissues, when impregnated with formaldehyde solution, will dissolve in concentrate sulphuric acid, especially when the mixture is allowed to heat up a little, and that the lignin bodies, or a portion thereof, precipitate on dilution of the solution. The following technique is recommended: triturate approximately 0.4 g. of dry sample in a 100-cc. beaker with 4 cc. of commercial 40 per cent formaldehyde solution, add 4 cc. of 72 per cent sulphuric acid, stir until the sulphuric acid has penetrated the mass (usually about 2 minutes), add 6 cc. of concentrated sulphuric acid, stir vigorously and allow to heat up (not above 70° C.), when solution is complete (generally about 10 minutes) pour into 200 cc. of distilled water at room temperature, add sufficient ignited asbestos to form a good mat on a gooch crucible, filter on a gooch, passing the filtrate through repeatedly until a mat capable of holding the floc is obtained, wash with 200 cc. of 5 per cent hydrochloric acid, dry to constant weight at 105° to 130° C., weigh, ignite and weigh again. Attempts to estimate the dissolved and the reprecipitated lignin by volumetric methods were unsuccessful. The amount of lignin thus found in spruce varies with the preliminary treatment of the wood; when the resins, fats, etc., have been extracted the apparent lignin content is lowered by about one-half of the material extracted; when the wood is extracted with alkali there is a further lowering of the lignin value. The hardwoods give a lower value by this method than by previously proposed methods, which is not entirely due to the alkali extraction, for an alkali-extracted chestnut gives a higher value by the ordinary sulphuric acid method of determining lignin. The lignin precipitate obtained as above is insoluble in water, but soluble in alcohol, acetone and acetic acid when these solvents contain a certain amount of water; the precipitate is soluble in concentrated sulphuric acid, even when washed from formaldehyde, and can be reprecipitated from and redissolved in this reagent any number of times. The lignin product reacts with chlorine and with nitric acid in a manner similar to ordinary lignin; it appears to absorb bromine. The reaction with formaldehyde is so definite that it might be suggested that there is in the ordinary woody tissue an aldehyde grouping or a substance capable of producing this grouping when acted upon by concentrated sulphuric acid, joined to or in close proximity to the lignin bodies; this grouping, when condensed with the lignin bodies, gives sulphuric acid insoluble derivatives; the formaldehyde condensation product, on the other hand gives sulphuric acid soluble products. As opposed to this view, it might be supposed that the lignin value given by formaldehyde would perhaps be considerably lower than that found by means of sulphuric acid alone, since the formaldehyde would add very little to the weight of the precipitate, unless the lignin bodies had a high molecular weight. It is remarkable that even chips after being soaked in formaldehyde solution, are entirely dissolved on the addition of strong sulphuric acid. Although more rapid at moderately high temperatures, the reaction proceeds equally well at low temperature. The cellulose products precipitated from their solutions are too far degraded to form films.—A. P.-C.

Paper Specialties

Machine for Making Elastic Paper. Wm. A. Lorenz. U. S. pat. 1,690,172, Nov. 6, 1928.—A series of cylinders are so arranged that the paper is delivered from one to the other, each successive cylinder running at a lower speed than the preceding one so as to effect a retardation in the speed of the paper, resulting in creping or crinkling the paper on transverse lines. These cylinders are preferably circumferentially corrugated and certain of the cylinders are roughened or provided with teeth to facilitate the crinkling action as the paper is delivered to them. The cylinders are also provided with stationary plates for holding the paper on the cylinders during the crinkling operations, the plates being provided with corrugations which match with the corrugations of the respective cylinders with which they are associated. The paper is preferably moistened by spraying at various points in the course of its travel through the machine.—A. P.-C.

Machine for Forming Pulp Articles. E. P. Kennedy. U. S. pat. 1,697,244, Jan. 1, 1929.—The machine is an improvement on the one described in U. S. pat. 1,621,671, of March 22, 1927, which consists of an annular rim or drum composed of a series of molds which are successively submerged during continuous rotation in a pulp vat and are subjected to a suction action when a coating of pulp is applied. According to the present invention articles of a superior quality are produced by providing means to maintain a continuous and uninterrupted suction from the time of application of the pulp on to the molds until completion of the article.—A. P.-C.

Method and Apparatus for Forming Paper Strips Suitable for the Manufacture of Rovings or Yarn. J. C. Sherman assignor to Brown Co. U. S. pat. 1,699,760, Jan. 22, 1929.—The pulp pick-up device, which may be a cylinder mold, is formed on its surface with a number of series of spaced alined ridges acting to produce slits defining partial lines of severance of the sheet being formed. As the pulp web is too weak at this stage, the strips are not formed completely separated but are left attached at intervals between the alined slits to present a sheet form. The pulp web is taken off the mold on a felt, and after removal from the felt the severing of individual strips is completed. The still somewhat moist strips are then in proper condition to be fed directly to the roving forming mechanism.—A. P.-C.

Improvements in Coated Paper Manufacture. Frank W. Egan. John Waldron Corp., New Brunswick, N. J. Paper Mill 52, No. 8, 128-134 (Feb. 23, 1929); Paper Trade J. 88, No. 10, 53-56 (March 7, 1929).—A brief outline of the improvements which have been made in paper coating methods and equipment during the last 30 years or so.—A. P.-C.

Manufacture of Photographic Paper. Joseph Rossman. U. S. Patent Office, Washington, D. C. Paper Trade J. 88, No. 7, 59-64 (Feb. 14, 1929).—A brief discussion of the difficulties encountered in the manufacture of photographic papers, with abstracts of United States patents relating to machines and processes for producing such papers.—A. P.-C.

Lithographic Paper Problems. Robert F. Reed. Lithographic Technical Foundation, Inc., University of Cincinnati, Cincinnati, Ohio. Paper Mill 52, No. 8, 76-88 (Feb. 23, 1929); Paper Trade J. 88, No. 10, 57-60 (March 7, 1929).—The difficulties encountered in the lithographing of paper are discussed under the four headings: register troubles, greasing or scumming, difficulties related to the securing of satisfactory printing, problems in the application of adhesives. The difficulties are discussed from the point of view of the causes to which they may be traced, the known means

by which they may be controlled and the unknown factors involved. A program of research on the problems related to paper for lithographic purposes is suggested.—A. P.-C.

Vulcanized Fiber Board. Joseph Rossman. U. S. Patent Office, Washington, D. C. Paper Trade J. 88, No. 5, 69-71 (Jan. 31, 1929).—A brief description of the process of manufacture of vulcanized fiber board, together with abstracts giving a survey of the United States patents for making vulcanized fiber board consisting of a number of layers united together.—A. P.-C.

Difficulties Encountered in Printing Coated Lithographing Papers. Anon. Mon. Papeterie Belge. 8, 751, 753 (Dec. 1928.)—A brief discussion of the causes of the commoner troubles encountered and of their remedies.—A. P.-C.

Miscellaneous

Method of Charging Cellulose Digesters and Means Therefor. P. A. Fresk. U S. pat. 1,690,192, Nov. 6, 1928. In a digester filler in which the chips are entrained by means of air or steam, the air or steam inlet is constructed in the form of a spiral surrounding the conical funnel through which the chips are delivered into the digester. In this way, when the air encounters the chips a powerful downward screwing movement is imparted to the chips, and when they leave the feeling tube they are uniformly spread out over the whole surface of the digester. After it has performed its work, the air returns to the fan through an annular opening around the feeding tube.—A. P.-C.

Process for Filling Sulphite Digester with Liquor. H. Clemm assignor to Zellstofffabrik Waldhof. U. S. pat. 1,693,999, Dec. 4, 1928. Heated sulphite liquor is forced by means of a pressure pump into a closed digester, the liquor being of such concentration that it can be used immediately for the digesting operation.—A. P.-C.

Heat Recovery in the Sulphite Process. C. Hangleiter and A. Schneider assignor to Zellstofffabrik Waldhof. Addn. No. 31,066 to French pat. 549,664, Aug. 17, 1926; U. S. pat. 1,693,983, Dec. 4, 1928. In a system for completely and rapidly relieving the pressure in sulphite digesters and recovering the waste heat and vapors, there is a connection between the waste gas pipes and the liquor pipes such that an injector is formed, by which the hot waste gases are drawn out of the digester without cooling them. Liquor from a closed storage tank is pumped through the injector back into the storage tank, and a check-valve is provided between the injector and the storage tank.—A. P.-C.

Charging Apparatus for Pulp Digesters. E. Olsson. U. S. pat. 1,694,139, Dec. 4, 1928. The material is fed to the digesters through a chute into which projects the liquor pipe with a downward directed nozzle. The liquor is forced through the nozzle under relatively high pressure to accelerate the movement of the chips and to pack them in the digester.—A. P.-C.

Sulphite Digester Operation. F. Hayward Johnson, Jr. Cherry River Paper Co. Paper Mill 52, No. 8, 170-174 (Feb. 23, 1929); Paper Trade J. 88, No. 11, 57-59 (March 14, 1929). A discussion of the cooking schedule followed at the Richwood mill of the Cherry River Paper Co., explaining the reasons of the various steps.—A. P.-C.

Natural System for the Analysis and Classification of Paper. A. S. Hammond, Western Waxed Paper Co., North Portland, Ore. Paper Trade J. 88, No. 7 55-58 (Feb. 14, 1929).—The system proposed consists in determining the "bulk index" (the caliper of the paper for a given base weight) the porosity (by measuring the amount of paraffin oil which the paper will absorb) and the apparent density of the fiber substance (obtained by dividing the weight of the paper by the volume of the fibers, which is found by subtracting the volume of the voids from the volume of the paper). It is based on the two following laws: (1) in the gelatinization (which is taken to include all "hydration" effects produced by mechanical and/or chemical reactions) of paper fibers the percentage of apparent voids in the sheet progressively decreases, and this decrease is at a constant ratio to the relative bulk index of the finished sheet, this ratio being designated as the "H-factor." (2) In ideal calendering (calendering in which the fibers are neither crushed no gelatinized) of paper the percentage of apparent voids remains constant. The bulk index of cellophane is about 0.45, which is taken as the lowest possible one for a sheet of cellulose; and relative bulk index is defined as the bulk index of the paper under consideration less the bulk index of cellophane. The H-factor varies according to the characteristics of the fibers used in the furnish, but is a constant for any given kind of fiber. In applying the method to the comparison of papers, the samples tested must have the same base weight or a correction must be made to allow for the variation of voids and of bulk index with base weight. The method of making the determination is described and the applications of the test are discussed.—A. P.-C.

Action of Liquid on Paper. James Strachan. Paper Mill 52, No. 3, 24-26 (Jan. 19) No. 4, 24-26 (Jan. 26, 1929).—A discussion of the penetrability of paper by liquids, more particularly from the standpoint of the penetration of writing ink and of printing inks into tub-sized and into engine-sized papers.—A. P.-C.

Jones Paper Finish Tester. C. H. L. Jones. Mersey Paper Co. U. S. pat. 1,668,593, May 8, 1928; Paper Trade J. 88, No. 4, 50 (Jan. 24, 1929).—The principles of the instrument consists in placing a sheet of the paper on a smooth plane surface and causing a smooth-faced drag to be moved over the surface of the paper by the action of a predetermined force, such as gravity, and obtaining an indication of the mean rate of movement. Preferably, the drag is always moved through a fixed distance and the indication is of the time occupied by the drag in travelling that distance.—A. P.-C.

Determining the Coating on Casein-Coated Paper. Gustave A. Sticht. Chemist-Analyst 17, No. 4, 7 (1928).—The method depends upon weighing shredded paper, digesting it with dilute ammonia, passing the liquid through a 100-mesh screen, evaporating and weighing.—A. P.-C.

Report of Permeability of Paper to Liquids. Allen Abrams. Marathon Paper Mills Co., Rothschild, Wis. Paper Mill 52, No. 8 112-116, 120 (Feb. 23, 1929); Paper Trade J. 88, No. 9, 40-42 (Feb. 28, 1929); Pulp Paper Mag. Can. 27, 423-425 (March 21, 1929).—A collaborative comparison of the curl test and of the dry indicator test, for measuring the degree of internal sizing, indicated that, on this paper, either test may be used with reasonably concordant results; but the curl test made with the Carson curl sizing tester seems to give the most uniform data. Two methods for measuring greaseproofness along the lines of those suggested by H. A. Smith (Technical Association Paper, Series XI, No. 1, p. 23 (1928) gave results which varied widely on the same paper and by the same method.—A. P.-C.

Fastness to Light of Colored Paper. William D. Appel and Th. C. Bentzen. Whiting Plover Paper Co., Stevens Point, Wis. Paper Trade J. 88, No. 9, 42 (Feb. 28, 1929).—The relative fastness to light of colored papers can be determined either by exposing them to sunlight or to carbon arc light, the Atlas Fade-ometer being probably as satisfactory as any instrument so far devised for the purpose, particularly the latest type which is provided with a fan to prevent excessive heating of the sample. For the quantitative measurement of fading, the simplified method described in the American Dyestuffs Report, 17, 49, (Jan. 23, 1928) can be used.—A. P.-C.

Paper and Pulp Making Cylinder Mold. T. Harvey. U. S. pat. 1,692,733, Nov. 20, 1928. In order to overcome the disadvantages of and troubles caused by having to pack the space between the end of the cylinder mold and the end walls of the vat, the cylinder mold is made closed at both ends. A hollow shaft forming a continuation of the cylinder acts as an outlet for the water which has passed into the cylinder mold, and is connected with a water-circulating pump. The shaft may also be used for setting up a small vacuum within the cylinder. A regular packed gland may thus be used for the journals of the cylinder mold in the tank, without danger of stock escaping around the ends of the cylinder mold.—A. P.-C.

Section of the

COST DEPARTMENT

of the

American Paper and Pulp Association

Edited by T. J. Burke C. A. Director Cost Dept.

Balance Sheet Alone no Longer Meets Needs*

Profit and Loss Account, and Surplus Account, Helpful in Reaching Credit Decisions—Address by Patrick W. R. Glover, Defines Current Practices in This Field

The community of interest between the credit man and the certified public accountant was emphasized in an address which Patrick W. R. Glover, president of the New York State Society of Certified Public Accountants, gave before the New York Credit Men's Association, December 16, in New York City, on the subject of the character of financial statements required by the credit man under modern methods of conducting business.

During the past decade, both accountants and credit men have recognized the fact that there are many points of practice with respect to which great advances can be made for the purposes of strengthening the credit structure and simplifying the procedures involved in the granting of credit.

Mr. Glover spoke of the value of an exchange of views between credit men and accountants, and of the increasing dependence that credit men are placing on financial statements prepared by certified public accountants.

"You are all no doubt familiar with the essentials in the preparation of financial statements for credit purposes," said Mr. Glover. "You are also fully conversant with the conclusions to be drawn from the application of ratios to the balance sheet, such as the ratio of current assets to current liabilities, receivables to sales, inventories to sales, and the like. I will endeavor this evening to present some other thoughts on the matter which I trust may be of interest to you.

"At the outset, I direct your attention to a pamphlet entitled 'Verification of Financial Statements' recently prepared for the Federal Reserve Board, Washington, D. C., by a special committee of the American Institute of Accountants. This pamphlet, a revision of the original issue printed in April, 1917, suggests an outline of procedure as a guide in the preparation of balance sheets and profit and loss accounts for credit purposes. It is issued under the authority of the Federal Reserve Board, may be obtained from the Supt. of Documents in Washington, and comprises only twenty-six pages. I may say, without fear of contradiction, that its preparation is one of the most constructive pieces of work the profession of accountancy has accomplished for the use of accountants, bankers, and credit men in connection with commercial loans. While it was prepared primarily as a guide to practising accountants, nevertheless, it serves a double purpose; indicating to the credit man and the banker what the accountant may be expected to cover during his examination. Though individual accountants may not agree entirely with the procedure outlined and the profession may not consider it as binding in view of the obvious limitations of the program, there is so much of merit in it that I do not hesitate to commend this document for study to the members of the New York Credit Men's Association, for I am sure they will find it of assistance in their work and particularly in giving them a clearer understanding of the duties and responsibilities of the public accountant.

Credit Man at Disadvantage

"For many years credit men were accustomed to receive from the client a balance sheet at stated periods, and upon this basis attempted to determine the amount of credit to be extended. There is no doubt that the credit man using such inadequate information was at a distinct disadvantage. While it is true the balance sheet shows the financial position at a given date, nevertheless, the particulars obtainable therefrom as to the operation of the business from one period to another are very meagre. The credit man may take the net worth at the beginning and end of each period and draw certain conclusions from the difference between these two figures, but it will be generally admitted that such conclusions are based upon incomplete data. The most outstanding example of corporations which issue the balance sheet, without any additional information of operations for the period, is the statement of the bank and trust company. Such institutions have not yet adopted the practice of furnishing statements other than the balance sheet.

"It is encouraging to note, however, that the present-day tendency is for the borrower to furnish complete details of his affairs to the credit man, in contrast with the submission of the balance sheet statement that for years was the custom. The credit man is in a position to accelerate this movement to secure adequate statements, whereas the accountant is faced with the desire on the part of his client to keep down expenses and limit the accountant's work to an investigation for balance sheet purposes only.

"I hold no brief for the accountant who curtails the amount of his work to fit the fee arranged with his client. The limitation of his fee, which may have been fixed in advance, is no excuse for incomplete service. However, when the client insists upon having merely an examination of the balance sheet, it is difficult for the accountant to influence him, much as he would like to do so, to extend the work and increase the fee to recoup him for the additional work entailed in examining the transactions from the date of the preceding balance sheet.

"As to the desirability of an audit which covers the periodical operations as well as the balance sheet position, there is no difference of opinion. The accountant knows that the client would be much better served in having an outside view-point upon the

* American Accountant.

business transactions for the whole period, and it is very clear that the credit man is entitled to and should demand full details.

Financial Statements

"In the light of the foregoing it would seem desirable to emphasize the necessity of securing from the client a balance sheet at the close of the period disclosing the financial position at that date; a profit and loss account covering the operations of the period from the date of the preceding balance sheet; and a surplus account showing the changes that have taken place during the period.

Earning Power Prime Collateral

"The credit man should insist upon having in very complete detail, the statement of the profit and loss account, for by comparison with statements of previous periods he is able to form a very definite opinion as to the conduct and operation of the business and as to the desirability of extending credit. Moreover, a concern may be able to show, over a period of years, balance sheets disclosing a satisfactory financial position, whereas from a profit and loss standpoint the company may be definitely on the downward grade, a condition which properly may lead the credit man to decide to discontinue a line of credit and thus avoid being placed in the position of a creditor in a bankrupt estate at a future date. Earning power plays an essential and significant part in the credit situation. A company without earning power is on the sure road to failure or liquidation, whereas a company with a good earning record is one that is likely to continue as a going proposition. *I, therefore, stress the importance of considering earning power as a prime collateral requisite to commercial loans.*

"In addition to the balance sheet, profit and loss account, and surplus account, the credit man might well request his client to furnish him with a statement which would show the disposition of funds. From such a statement it can be ascertained very readily what disposition has been made of increased resources for the period arising out of earnings, borrowed money, and so on. At a glance the credit man can satisfy himself as to whether or not such funds have been used in the best way to meet the needs of the business.

"Many thoughts run through the mind of the credit man in considering a loan, such as: 'What amount of salaries and commissions are the partners or officers drawing from the business? What is the dividend policy of the company? Are sufficient earnings being retained in the business to take care of the normal expansion thereof? Is the concern taking full advantage of discounts?'

"If adequate information is submitted to the credit man he is relieved of much detail questioning and investigation. All of these matters are important as bearing upon the integrity of the management, and may lead the credit man to make further inquiries regarding the affairs of the concern before extending credit.

"It has been stated in the preceding paragraphs what are the essential statements to which the credit man is entitled in order to give him conclusive data regarding his client's affairs. In connection, therewith, it is suggested that such statements should be certified by reputable public accountants unless for very good reasons, fully explained, the concern feels it unnecessary to have its accounts audited. In the submission of certified statements when the accountant expresses an unqualified opinion in his certificate that the statements are correct, it must be assumed by the credit man receiving them that all verifications have been made to the satisfaction of the accountant. It does not seem desirable or necessary that the accountant should describe in detail in his certificate the procedure by which he arrived at his conclusions.

"It is impossible within the limit of time allotted to me to discuss in complete detail every item that may be found in the merchant's balance sheet, so I will limit my remarks to special comments on the balance sheet items.

"The credit grantor is interested in statistical information regarding notes and accounts receivable, but there are one or two more important points which may be mentioned in considering these current assets. Statistics, such as the classification of receivables as to age, are of value only after provision has been made for certain essentials. The most important item to be determined in the verification of receivables is the amount of reserve for bad and doubtful accounts. If this reserve is adequate the statistics may be of considerable value. Another important matter for the accountant to deal with in the aging of accounts is to examine those accounts receivable which have been closed out through the receipt of a note receivable. It follows that the accountant should analyze the conditions regarding notes receivable which have been renewed. A note receivable on the surface may appear to be a current asset, but upon investigation it might be quite clearly shown that by reason of renewals such an item was obviously in the nature of a deferred asset rather than a current asset.

"Except in special businesses such as brokerage, it is not usually the practise to verify accounts receivable by having the accountant communicate directly with the debtor. The client frequently objects to this procedure, as he has not yet been educated to the advantages of this scheme of confirmation. It might be well for the credit man to keep in mind the desirability of this additional outside substantiation of that part of the current assets, with the idea that by a process of suggestion and education the business man would normally expect to have this work done.

Merchandise Inventories

"To the credit man the merchandise inventory is usually the most important asset on the balance sheet as it frequently forms a large part of the current assets. The credit grantor must be satisfied in respect of the accuracy of this item. He must be sure that in addition to the verification of the clerical accuracy of the inventory, proper allowances have been made for obsolete and unsalable merchandise and that the values and quantities are correct. There is no dispute between credit men and accountants on this score. How can the credit man satisfy himself in this respect? He must look primarily to the public accountant for this assurance. What then are the general conditions under which the public accountant examines the inventory of his client? It is safe to say that the accountant is not present in one case out of one hundred when the physical inventory is taken. In other words, the accountant's examination in the great majority of cases is commenced several days, if not weeks, after the date of the physical inventory-taking. Let us then consider examinations under two heads:

"(a) Those in which the work is commenced some time after the physical inventory-taking.

"(b) Those in which the accountant is called in to supervise and assist in the inventory-taking and valuation.

"In the first instance, the accountant makes his examination of the inventory from the records and should at the outset satisfy himself as to the integrity of the client so that he may determine in his own judgment whether or not he can rely upon representations that may be made to him regarding the inventory count and valuation. In the second place, he should satisfy himself that the program of procedure in connection with the inventory-taking is one which, in his opinion, should produce correct results. With these two important points settled in his mind, the accountant may then proceed with some assurance to make the usual examination of the merchandise inventory and satisfy himself from the records as to quantities, condition, and valuation. Having made such an examination the accountant, in my opinion, is justified in giving an unqualified certificate. If, on the other hand, the accountant has a suspicion that something is wrong by reason of the fact that the examination of the records has shown unsatisfactory results, he should withdraw from the assignments, unless the client arranges for the taking of a physical inventory of a later date under independent supervision.

Accountant Not an Appraiser

"Let us now consider the second phase, when the accountant is engaged to supervise the inventory-taking. Much has been said and written about the accountant's responsibility with respect to the physical inventory. The accountant is not an appraiser, valuer, or insurer. He is an individual with a background of experience based upon the verification of business transactions from accounting records. The credit man or banker who engages his services to supervise the taking of an inventory should realize that he is engaging an accountant, and the credit grantor who speaks of the responsibility of the accountant in respect of the physical count, condition, and valuation of the inventory should do so in the light of the experience under which the accountant is limited by his training. In my opinion, it is dangerous for the banker or credit man to assume that he is having an appraisal of a merchandise inventory when he employs the public accountant to supervise the physical inventory-taking.

Profession Never Shirks Responsibility

"In endeavoring to place before you frankly the limit of responsibility of the accountant, in connection with the inventory, it should be emphasized that the profession of accountancy has never shirked responsibility. The accountant fully realizes the importance of giving every assurance of the correctness of the inventory to the credit man and is willing to do anything in his power to be of assistance in that determination. The accountant is aware that in special cases it is helpful to supplement his examination of the records by inspection of the physical inventory, but what the accountant wishes to make clear to the banker and the credit man is a realization of the work he is fitted to perform by his experience. The experienced accountant does not wish to pose as anything but the type his profession has produced.

"A statement on this matter, contained in the following extract taken from a special editorial on 'The Certified Audit' issued in the December, 1928, monthly bulletin of the Robert Morris Associates, indicates the views of that organization, viz:

"'In order to certify a balance sheet without reservations as to inventory, the accountant has to satisfy himself that the quantities on hand, and the basis of valuation as well as computations, are substantially accurate and reasonable. The accountant will not insist upon taking stock or even supervising the stocktaking if the company has a well-organized system and adequate records from which he can prove the essential accuracy of the inventory quantities.'

Liabilities

"When a client borrows money for the purpose of taking advantage of trade and cash discounts in the payment of accounts payable, the accountant should satisfy himself that this has been done and that the only accounts payable at the date of the balance sheet are those which are not yet due. The fact that a client is not taking advantage of discounts under such circumstances indicates either an unsatisfactory cash position, or negligence.

"It has been the general practise for some years to include in current assets those assets which should be available in the form of cash within twelve months from the date of balance-sheet. It also has been customary to include among current liabilities those liabilities which mature within twelve months from the date of the balance sheet. In view of this limitation upon the current position it is essential that such items are receivables and inventories should be specially scrutinized for slow assets. As previously pointed out, notes receivable which have been renewed may under certain circumstances be included under deferred assets, and the same is true of certain classes of merchandise inventory.

Assumes Balance Sheet Position Is Normal

"In preparing statements for credit purposes the accountant should disclose any important matters which have come to his attention during the course of his investigation, although the transactions took place subsequent to the date of the balance sheet. For example, if subsequent to the balance sheet date the client applied current funds to an appreciable degree for the extension of plant facilities, thus materially changing the current position of the company, the credit man should have such information submitted. Again, corporation 'A' whose management is closely identified with corporation 'B' may submit a balance sheet which includes a deliberate substitution of some of the assets of corporation 'B' for the sole purpose of disclosing a satisfactory current position at the balance sheet date. Shortly after the balance sheet date the normal position is reinstated. The credit man should be provided with details of such a transaction. In other words, the credit man is entitled to assume that in the absence of notice the balance sheet position is a normal one and that any essential change in the policy of a concern or the current position of a company between the date of the balance sheet and the date of the loan which would materially change the financial condition should be submitted to the credit man for his consideration.

Contingencies

"It goes without saying that all contingent liabilities should be shown by the accountant as a foot-note to the balance sheet, with adequate information as to their nature. The discounting of bills receivable, acceptances, and the like, by the client, especially when in the past it has not been his policy to discount, has an important bearing upon such ratios as current assets to current liabilities, and so on. Current assets pledged, in the amount so pledged as security for liabilities, should be disclosed as a note on the liability side or on the asset side.

"Furthermore, inquiries should be made as to any lawsuits or other contingent items which may have an important bearing upon the financial position of a concern. A company, for instance, may have embarked upon an extension program involving heavy expenditures to be paid for at some future date which are not disclosed by the books, but through investigation have been uncovered by the accountant. The credit man should, of course, be notified of such contingencies.

Fraudulent Loans

"Credit men from time to time are shocked by discovering they have made what has been termed a 'fraudulent loan.' That is to say, the borrower has submitted financial statements which include, say, an overstated inventory upon which the lender has extended credit. You will doubtless agree there is no hope of entirely eliminating such incidents from business as there will always exist in our midst the criminal who will find a means of outdoing the most carefully laid plans to protect the lender. The most the accountant and the credit man can expect is to reduce these cases to a minimum. Business men realize fully today that the success of any venture lies in the ability and integrity of the management. Undoubtedly, the most important part of the policy of the credit man is to satisfy himself in this respect before making a loan to a new client. Similarly, the accountant can avoid many pitfalls if he carefully weighs the moral risk attaching to any new client before accepting the assignment. Both the credit man and the accountant should refrain from entering into business relations with a new client about whose integrity there is some doubt. In all cases the credit man and the accountant should employ a program of verification in the investigation of a client's affairs which, experience has shown, will disclose fraud in most cases, though under the best conditions unfortunate incidents sometimes arise.

Cooperation

"When there is a substantial interest in a client's affairs by reason of the extension of credit, it is desirable that the credit man and the accountant who makes the examination should have the power to consult together freely upon the client's business, preferably before the accountant commences his examination. By

this means the accountant would have the opportunity, as a preliminary, of obtaining from the credit man any information he has regarding the client's affairs and instructions as to any special points he wishes explained. The accountant should do everything he can to obtain the permission of his client to consult with the credit man and the credit man should not hesitate to request such permission from the client. The credit man and the accountant have a mutual interest in preventing the making of bad loans. While the accountant primarily has his client's interest at heart, nevertheless, when he is asked to prepare financial statements for credit purposes he should look at the conditions from the point of view of the lender as well as from the point of view of the client. Further, he must be sure that in the preparation of such statements all essential features are clearly stated without equivocation and are not misleading in any respect.

Conclusion

"I congratulate the New York Credit Men's Association upon the work they are doing and look forward in the near future to a similar joint meeting under the auspices of the New York State Society of Certified Public Accountants. There can be no question as to the value of these discussions, which, I am sure, will draw together more closely the certified public accountants and credit men, confident that such cooperation helps toward a more stable condition in the financing of business."

News of the Boston Paper Trade

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., May 19, 1930.—At the next meeting in the sales promotional series conducted for the sales force of Carter, Rice & Co. Corp., to be held May 24, T. R. Bailey, of the Yale University Press, will talk on the art of book-making. Mr. Bailey is well qualified to discuss this subject as he has had charge of the book-making department of the Yale University Press for a number of years.

The inserts in the magazine "Fortune," are printed on Magazine Coated, a product of the Oxford Paper Company, Rumford, Me. The text is printed on Waverley Vellum, made by the Reading Paper Mills, Reading, Pa. Both mills have reason to feel proud of the beautiful results obtained from the use of their products. These papers are handled by Carter, Rice & Co. Corp.

The Strathmore price list, containing Strathmore Wedding, Social and Business Announcements, for which Carter, Rice & Co. Corp. have the New England distribution, is just off the press.

Knight, Allen & Clark, Inc., have taken over the Flametone Greeting Vellum, made by the Geo. W. Wheelwright Paper Company, of North Leominister and Wheelwright, Mass., in the Bristol weight and in five brilliant colors, red, orange, yellow, green and cerise.

The annual statement of Storrs & Bement Company, just made public, shows a surplus of $304,853. The assets are: Machinery, $2,413; merchandise, $308,613; furniture, fixtures, tools, $16,295; vehicles, $5,204; notes receivable, $66,959; accounts receivable, $477,222; cash, $139,323; securities, $70,001; interior alterations, $3,809; prepaid life insurance, $1,049; advertising, $980; miscellaneous receipts, $1,754. Total, $1,093,622. Liabilities include capital of $594,000, accounts payable of $172,268, and reserve for taxes of $22,501.

Following an article in the April number of "How," the house organ of the Tileston & Hollingsworth Company, calling attention to the belief that much could be done by the various Typothetae to make industrial New England more printing-conscious, a constructive suggestion is given in the May number. The company offers "to supply the paper without charge for a campaign of direct-mail advertising that shall have for its purpose a stimulation of printing sales for the dealers of that typography.

One unit of the new bleaching plant of the Deerfield Glassine Co., Monroe Bridge, Mass., is in operation and it is expected that another will be running within a month.

FOR GOVERNMENT PAPER MILL

(Continued from page 21)

cepted, no prediction can be made as to the penalty the Government will suffer in the matter of price and quality. The penalty will be substantial if we may judge the future by the past. It is certain that the contractor will not deliver paper as desired, and this will be very detrimental to the Government's interest.

"The contract price for similar paper for the fiscal years 1925, 1926 and 1927 was 49⅜ cents a pound. On the other hand, if the Government adheres to the policy of awarding the contract to more than one bidder, it is confronted with the necessity next year of paying a penalty of $112,000 if it awards 200 tons to the second bidder or a penalty of $144,000 if it awards 400 tons to the second bidder. Certainly, if the second bidder's interest is not continued by giving him a fair share of the business for 1931 on the basis of the fair and reasonable bid he has submitted, it is doubtful if a competitive bidder will be found for this business in the future.

"Assuming that the cost of production of this paper is 40 cents a pound, the contractor, if given the entire contract for 1,200 tons, would make a profit of $80 a ton, or $96,000. If, on the other hand, he were given the contract for only 1,000 tons (1,200 tons less 200 tons) at 49 cents a pound, his profits would be $180 a ton, or $180,000, and if given the contract for only 800 tons (1,200 less 400 tons) at 51½ cents a pound, his profits would be $230 a ton, or $184,000. In other words, if the Government undertakes to protect itself by dividing this business, the larger contractor proposes to exact an additional profit of $84,000 ($180,000 less $96,000) if 200 tons are given to another bidder, or, an additional profit of $88,000 ($184,000 less $96,000) if 400 tons are given to another bidder, notwithstanding the fact that the quantity he would be required to manufacture would be reduced one-sixth or one-third. In the event this bidder is awarded less than the entire amount, his profit will be augmented, of course, by whatever he may make through the manufacture of paper for commercial use during the period that one machine is not required for the manufacture of Government paper because of the reduced amount."

Development of Secret Processes Not Feasible

"The development of secret processes for further protection against illegal manufacture is not feasible when the Government is required annually to advertise its specifications and to rely upon a private contractor to carry on the manufacturing operations," said Mr. Wood.

"The records show that the Treasury Department paid in express charges for the transportation of currency paper from the manufacturer's mills to Washington $89,182.68 in the fiscal year 1926; $88,049.79 in the fiscal year 1927; $87,237.55 in the fiscal year 1928, and $75,086.73 in the fiscal year 1929. The estimated express charges on 1,200 tons for the fiscal year 1931 are $66,000. If a mill is located in the District of Columbia adjacent to the Bureau of Engraving and Printing this $66,000 for express would be entirely eliminated, and in addition a substantial amount for such items as packing cases, duplicate counts, etc., would be saved.

"If we assume that 47 cents a pound is a price that will give the contractor a reasonable profit, then the saving that the Government would make through manufacturing this paper in a Government mill would be $168,000. These two items ($66,000 for express charges and $168,000 for profit) amount to $234,000 in one year."

Price Bros.' New Building Nearly Completed

Transfer of Price Bros. & Co.'s office to the new building erected in Quebec City has been begun, and is expected to be completed by the middle of June, at which time the building itself will be finished. Seventeen stories in height, the building is by far the largest in the city, and dominates the business section. Fifteen of the stories provide office space, and Price Bros. will occupy all the offices on the seven floors between the ninth and fifteenth stories.

IMPORTS OF PAPER AND PAPER STOCK

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING MAY 17, 1930

SUMMARY

Cigarette paper .....805 cs.
Wall paper .....45 bls., 17 cs.
Paperhangings ..... 18 pkgs., 8 bls., 3 cs.
News print .....1359 rolls
Printing paper .....65 bls., 263 cs.
Wrapping paper .....144 cs.
Packing paper .....6 cs.
Colored paper .....17 bls., 29 cs.
Decalcomania paper .....70 cs.
Tissue paper .....36 cs.
Surface coated paper .....1 bls., 23 cs
Coated paper .....16 cs.
Baryta coated paper .....25 cs.
Gold coated paper .....4 cs.
Metal coated paper .....18 cs.
Writing paper .....6 cs.
Filter paper .....106 bls., 11 cs.
Drawing paper .....12 cs.
Wafer paper .....9 cs.
Gummed paper .....6 cs.
Stencil paper .....2 cs.
Parchment paper .....1 cs.
Aluminum paper .....10 cs.
Trunk paper .....1 cs.
Sulphate paper .....191 rolls
Miscellaneous paper .....
.....553 rolls, 95 pkgs., 132 bls., 212 cs.

CIGARETTE PAPER

H. Stauss, Vincent, Havre, 41 cs.
De Manduit Paper Corp., Vincent, Havre, 253 cs.
Gluckman & Strauch, Roussillon, Havre, 5 cs.
Standard Products Corp., Roussillon, Havre, 91 cs.
Liggett & Myers Tobacco, Roussillon, Havre, 28 cs.
Standard Products Corp., Ile de France, Havre, 230 cs.
British American Tobacco Co., Anjer, Barcelona, 40 cs.
Graham Paper Co., Anjer, Barcelona, 30 cs.
P. J. Schweitzer, Pr. Wilson, Marseilles, 87 cs.

WALL PAPER

F. J. Emmerich, Adriatic, Liverpool, 6 bls.
——, St. Louis, Hamburg, 6 bls.
——, Reliance, Hamburg, 2 bls.
F. J. Emmerich, Reliance, Hamburg, 2 bls.
J. E. Bernard & Co., Stuttgart, Bremen, 2 cs.
Schmidt & Pritchard, Stuttgart, Bremen, 24 bls.
A. C. Dodman, Jr., Inc., Majestic, Southampton, 5 bls.
A. L. Diament & Co., Majestic, Southampton, 4 cs.
F. J. Emmerich, Majestic, Southampton, 3 cs.
F. J. Emmerich, Mauretania, Southampton, 3 cs.
A. L. Diament & Co., Mauretania, Southampton, 4 cs.
Thomas & Pierson, Mauretania, Southampton, 1 cs.

PAPER HANGINGS

W. H. S. Lloyd & Co., American Shipper, London, 18 pkgs.
A. C. Dodman, Jr., Inc., Scythia, Liverpool, 7 bls.
Whiting & Patterson Co., Inc., Majestic, Southampton, 1 ble.
F. L. Kramer & Co., Majestic, Southampton, 3 cs.

NEWS PRINT

——, Bergensfjord, Islo, 240 rolls.
Parsons & Whittemore, Inc., Stuttgart, Bremen, 750 rolls.
Lunham & Reeve, Lagaholm, Kotka, 369 rolls.

PRINTING PAPER

E. Dietzgen & Co., N. Amsterdam, Rotterdam, 122 cs.
P. C. Zuhlke, Lapland, Antwerp, 52 cs.
Hensel, Bruckman & Lorbacher, Reliance, Hamburg, 4 cs.
Perkins Goodwin & Co., Reliance, Hamburg, 65 bls.
Oxford University Press, Scythia, Liverpool, 20 cs.
C. Steiner, Stuttgart, Bremen, 15 cs.
T. N. Fairbanks Co., Pr. Wilson, Genoa, 50 cs.

WRAPPING PAPER

E. Dietzgen & Co., N. Amsterdam, Rotterdam, 80 cs.
E. Dietzgen & Co., St. Louis, Hamburg, 19 cs.
Sylvania Industrial Corp., Lapland, Antwerp, 39 cs.
Japan Paper Co., Lapland, Antwerp, 6 cs.

PACKING PAPER

Gevaert Co. of America, Lapland, Antwerp, 6 cs.

COLORED PAPER

H. Lange, Europa, Bremen, 1 cs.
Quality Art Novelty Co., Europa, Bremen, 7 cs.
E. Hennigson & Co., Stuttgart, Bremen, 3 bls.
Quality Art Novelty Co., Stuttgart, Bremen, 14 bls.
P. H. Petry & Co., Stuttgart, Bremen, 7 cs.
S. Gilbert, Stuttgart, Bremen, 14 cs.

DECALCOMANIA PAPER

C. W. Sellers, Europa, Bremen, 26 cs.
C. W. Sellers, Reliance, Hamburg, 18 cs.
B. F. Drakenfeld & Co., Adriatic, Liverpool, 20 cs.
L. A. Consmiller, Stuttgart, Bremen, 6 cs.

TISSUE PAPER

B. F. Drakenfeld & Co., Adriatic, Liverpool, 2 cs.
F. C. Strype, Bird City, Helsingfors, 34 cs.

SURFACE COATED PAPER

Gevaert Co. of America, Lapland, Antwerp, 21 cs.
Whiting & Patterson Co., Inc., Reliance, Hamburg, 2 cs.
Brown Bros. & Co., Reliance, Hamburg, 1 ble.

COATED PAPER

Pacific National Bank, Reliance, Hamburg, 16 cs.

BARYTA COATED PAPER

Globe Shipping Co., Stuttgart, Bremen, 25 cs.

GOLD COATED PAPER

F. Murray Hill Co., Stuttgart, Bremen, 4 cs.

METAL COATED PAPER

Hensel, Bruckman & Lorbacher, Stuttgart, Bremen, 18 cs.

WRITING PAPER

Japan Paper Co., Ile de France, Havre, 2 cs.
T. N. Fairbanks Co., Majestic, Southampton, 4 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., American Shipper, London, 11 cs.
J. Manheimer, Majestic, Southampton, 106 bls.

DRAWING PAPER

H. Reeve Angel & Co., Inc., American Shipper, London, 9 cs.
Devoe & Reynolds Co., Ile de France, Havre, 2 cs.
G. W. Sheldon & Co., Mauretania, Southampton, 1 cs.

WAFER PAPER

W. L. Hass, N. Amsterdam, Rotterdam, 9 cs.

GUMMED PAPER

Heemsoth Basse & Co., St. Louis, Hamburg, 6 cs.

STENCIL PAPER

International F'd'g. Co., St. Louis, Hamburg, 2 cs.

PARCHMENT PAPER

A. Pagenstecher, St. Louis, Hamburg, 1 cs.

ALUMINUM PAPER

H. D. Catty & Co., Lapland, Antwerp, 10 cs.

TRUNK PAPER

P. H. Petry & Co., Reliance, Hamburg, 1 cs.

SULPHATE PAPER

Insight Paper Co., Bergensfjord, Frederickstad, 191 rolls.

MISCELLANEOUS PAPER

Tamm & Co., N. Amsterdam, Rotterdam, 1 cs.
The Prager Co., Inc., N. Amsterdam, Rotterdam, 1 cs.
——, Bergensfjord, Oslo, 553 rolls, 132 bls.
Whitfield Paper Works, Tak. Maru, Kobe, 28 cs.
W. J. Byrnes, St. Louis, Hamburg, 3 cs.
Keller Dorian Paper Co., Roussillon, Havre, 9 cs.
Canson & Montgolfier, Roussillon, Havre, 46 cs.
De Manduit Paper Corp., Roussillon, Havre, 10 cs.
Manufacturers Trust Co., E. Francqui, Antwerp, 95 pkgs.
Keller Dorian Paper Co., Ile de France, Havre, 13 cs.
Meadows Wye & Co., Ile de France, Havre, 2 cs.
Guibout Freres, Ile de France, Havre, 5 cs.
Steffens Jones Co., May. Maru, Canton, 6 cs.
Wilkinson Bros. & Co., Inc., Pr. Wilson, Genoa, 12 cs.
——, Pr. Wilson, Genoa, 12 cs.
Japan Paper Co., Pr. Wilson, Genoa, 63 cs.
Lo Curto & Funk, Pr. Wilson, Marseilles, 1 cs.

RAGS, BAGGINGS, ETC.

Baring Bros. & Co., Transylvania, Glasgow, 53 bls. paper stock.
Brown Bros. & Co., Transylvania, Glasgow, 75 bls. rags.
E. Butterworth & Co., Inc., Ala, Antwerp, 65 bls. bagging.
E. Mayer, Ala, Antwerp, 46 bls. bagging.
E. Donohue & Son, Ala, Antwerp, 49 bls. rags.
The Barrett Co., Drachenstein, Antwerp, 216 bls. rags.
Irving Trust Co., Vincent Dunkirk, 106 bls. rags.
Equitable Trust Co., Vincent, Dunkirk, 76 bls. flax waste.
Darmstadt, Scott & Courtney, Vincent, Havre, 107 bls. rags.
——, Etna, Gefle, 50 bls. rags.
——, Yaka, Algiers, 170 bls. rags.
Brown Bros. & Co., Francisco, Newcastle, 164 bls. rags.
A. W. Fenton, Inc., Coahoma County, Rotterdam, 4 bls. rags.
Van Oppen & Co., Coahoma County, Rotterdam, 132 bls. bagging.
Darmstadt, Scott & Courtney, Coahoma, County, Rotterdam, 101 bls. rags.
G. M. Graves Co., Coahoma County, Rotterdam, 181 bls. rags.
1st Natl. Bank of Boston, E. Francqui, Antwerp, 59 bls. flax waste.
1st Natl. Bank of Boston, E. Francqui, Antwerp, 33 bls. rags.
——, Mercer, Manchester, 29 bls. bagging.
R. M. Gray, Inc., Mercer, Manchester, 63 bls. paper stock.
T. D. Downing & Co., London Exchange, London, 97 bls. bagging.
Equitable Trust Co., Minnesota, London, 72 bls. rags.
Royal Manfg. Co., Minnesota, London, 177 bls. thread waste.
Intl. Trust Co., Anjer, Valencia, 131 bls. rags.
Chemical Bank & Trust Co., Anjer, Valencia, 95 bls. rags.
Fidelity Trust Co., Anjer, Barcelona, 83 bls. rags.
Chemical Bank & Trust Co., Anjer, Barcelona, 270 bls. rags.
Banco Com'l. Italiane Trust Co., Anfora, Savona, 105 bls. bagging.
A. H. Searle, Inc., Cabo Mayor, Marseilles, 70 bls. rags.
S. Birkenstein & Son, Cabo Mayor, Barcelona, 100 bls. rags.
H. G. Lichtenstein, Cabo Mayor, Barcelona, 150 bls. bagging.
Irving Trust Co., Cabo Mayor, Barcelona, 48 bls. rags.
Robert Blank, Cabo Mayor, Barcelona, 178 bls. rags.

OLD ROPE

——, Transylvania, Glasgow, 60 coils.
W. Steck & Co., N. Amsterdam, Rotterdam, 93 coils, 39 bls.
Brown Bros. & Co., Vincent, Havre, 88 coils.
——, Coahoma County, Rotterdam, 60 coils.

(Continued on Page 68)

Imports of Paper and Paper Stock

(Continued from page 67)

Int'l. Trust Co., St. Louis, Hamburg, 31 coils.
Brown Bros. & Co., St. Louis, Hamburg, 26 bls., 60 coils.
Banco Com'l. Italiane Trust Co., Exton, Naples, 57 coils.
International Purchasing Co., Exton, Genoa, 138 coils.
Brown Bros. & Co., Vulcania, Trieste, 111 coils.
———, London Exchange, London, 69 coils.
Brown Bros. & Co., Cabo Mayor, Barcelona, 105 coils.
International Purchasing Co., Cabo Mayor, Huelva, 352 coils, 39 bls.
International Trust Co., Anjer, Barcelona, 39 coils.

CASEIN

Kalbfleisch Corp., The Angeles, B. Ayres, 834 bags.
National City Bank, Eastern Prince, B. Ayres, 1667 bags.
1st National Bank of Boston, American Legion, B. Ayres, 417 bags.

WOOD FLOUR

The Burnet Co., N. Amsterdam, Rotterdam, 500 bags.
F. W. Schmalz Co., N. Amsterdam, Rotterdam, 300 bags.
State Chemical Co., N. Amsterdam, Rotterdam, 100 bags.
State Chemical Co., Coahoma County, Rotterdam, 507 bags, 33180 ks.
B. L. Soberski, Norefjord, Frederickstad, 3750 bags.
Corn Exchange Bank & Trust Co., Norefjord, Flekkefjord, 1000 bags.

WOOD PULP

Atterbury Bros., Inc., Bergensfjord, Oslo, 500 bls. wood pulp.
Int'l. Trust Co., Bergensfjord, Oslo, 250 bls. sulphite.
E. M. Sergeant & Co., Bergensfjord, Oslo, 150 bls. wood pulp.
M. Gottesman & Co., Inc., Etna, Iggesund, 750 bls. wood pulp, 150 tons.
Pagel Horton & Co., Inc., Etna, Gefle, 3500 bls. wood pulp, 650 tons.
Bulkley Dunton & Co., Etna, ———, 3625 bls. wood pulp.
M. Gottesman & Co., Inc., Lagaholm, Stockholm, 1350 bls. sulphite.
Lagerloef Trading Co., Lagaholm, Kotka, 609 bls. sulphite.
Price & Pierce, Ltd., Gliffwood, Wallvik, 600 bls. sulphite, 100 tons; 800 bls. sulphate, 133 tons.
J. Andersen & Co., Norefjord, Greaker, 375 bls. sulphite.
J. Andersen & Co., Norefjord, Sarpsborg, 150 bls. sulphite.
E. J. Keller Co., Inc., Liverpool Maru, ———, 334 bls. wood pulp, 50 tons.
A. P. W. Paper Co. (Albany), Evviva, Chandler, 7514 bls. sulphite.

BALTIMORE IMPORTS

WEEK ENDING MAY 17, 1930

Congoleum Nairn Co., Ala, Antwerp, 130 bls. bagging; 2085 bls. rags.
Whaling Waste Products Corp., Ala, Antwerp, 88 bls. waste.
S. Shapiro & Co., Vincent, Dunkirk, 160 bls. rags.
Congoleum Nairn Co., Vincent, Dunkirk, 243 bls. rags; 29 bls. bagging.
E. M. Sergeant & Co., Cliffwood, Hernosand, 300 bls. sulphate, 50 tons.
Pagel Horton & Co., Inc., Cliffwood, Hernosand, 150 bls. sulphite, 25 tons.
J. Andersen & Co., Cliftwood, Hernosand, 2450 bls. sulphate, 490 tons.
Price & Pierce, Ltd., Cliffwood, Wallvik, 1424 bls. wood pulp, 232 tons; 4747 bls. sulphite, 793 tons.
Bulkley Dunton & Co., Cliffwood, ———, 3425 bls. wood pulp, 635 tons.
Bulkley Dunton & Co., Bilderdyk, ———, 1225 bls. wood pulp.
National City Bank, Minnesota, Dunkirk, 274 bls. rags.
National City Bank, Minnesota, Havre, 826 bls. rags.

NORFOLK IMPORTS

WEEK ENDING MAY 17, 1930

E. Butterworth & Co., Inc., Ala Antwerp, 110 bls. rags.

BOSTON IMPORTS

WEEK ENDING MAY 17, 1930

T. M. Duche & Sons, Brazilian Prince, B. Ayres, 417 bags casein.
1st Nat'l. Bank of Boston, Brazilian Prince, B. Ayres, 1250 bags casein.
Chemical Bank & Trust Co., Brazilian Prince, B. Ayres, 834 bags casein.
———, Etna Gefle, 6000 bls. wood pulp.
J. Andersen & Co., Etna, Gefle, 625 bls. wood pulp.
Pagel Horton & Co., Inc., Etna, Gefle, 4875 bls. wood pulp.
Bulkley Dunton & Co., Etna, ———, 2575 bls. wood pulp.
Price & Pierce, Ltd., Bird City, Wallvik, 5700 bls. sulphite, 950 tons; 5100 bls. sulphate, 850 tons.
G. F. Malcolm & Co., Scythia, Liverpool, 37 cs. tissue paper.
Brown Bros. & Co., Francisco, Hull, 243 bls. 385 coils old rope.
Brown Bros. & Co., Francisco, Newcastle, 94 coils old rope.
Bulkley Dunton & Co., Korsholm, ———, 2500 bls. wood pulp.
Bulkley, Dunton & Co., West Eldara, ———, 675 bls. wood pulp.

PORTLAND, ME., IMPORTS

WEEK ENDING MAY 17, 1930

Pagerloef Trading Co., Bird City, Helsingfors, 134 bls., 96 rolls wood pulp boards; 570 bls. sulphite; 640 bls. sulphate.
Price & Pierce, Ltd., Bird City, Wallvik, 6000 bls. sulphate.

PHILADELPHIA IMPORTS

WEEK ENDING MAY 17, 1930

Belgam Corp., Tak. Maru, Kobe, 50 bls. rags.
Meidich Process Co., Bird City, Helsingfors, 125 cs. tissue paper.
E. M. Sergeant & Co., Cliffwood, Hernosand, 1500 bls. sulphite, 250 tons; 2100 bls. sulphite, 350 tons.
J. Andersen & Co., Cliffwood, Hernosand, 1500 bls. sulphate, 285 tons.
Bulkley, Dunton & Co., Cliffwood, ———, 2000 bls. sulphate.
S. Birkenstein & Son, Cabo Mayor, Barcelona, 34 bls. rags.
E. J. Keller Co., Inc., Cabo Mayor, ———, 147 bls. rags.
S. Birkenstein & Son, Cabo Mayor, Marseilles, 55 coils old rope.
A. H. Searle, Cabo Mayor, Marseilles, 76 bls. rags.
Libert National Bank & Trust Co., Exton, Palermo, 88 bls. rags.
D. I. Muhpry, Exton, Leghorn, 147 bls. rags.
———, Minnesota, Dunkirk, 1027 bls. rags.
Corn Exchange Bank & Trust Co., Minnesota, Dunkirk, 50 bls. rags.
Philadelphia National Bank, Minnesota, Dunkirk, 28 bls. rags.
L. Dupont & Co., Minnesota, Havre, 89bls. rags.
Karzenstein & Keene, Inc., Minnesota, Havre, 49 bls. rags.
———, Minnesota, Havre, 154 bls. rags.
Guaranty Trust Co., Minnesota, Havre, 157 bls. rags.
Philadelphia National Bank, Minnesota, Havre, 146 bls. rags.
Tradesmans National Bank, Minnesota, Havre, 48 bls. rags.

Paper Concerns Get Tax Refunds

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., May 14, 1930.—Robert H. Lucas, Commissioner of Internal Revenue has announced a refund to the Nekonegan Paper Corporation of Bangor, Me., amounting to $32,151.78 for the period from October 9, 1920 to March 31, 1921. The entire over-assessment was due to the computation of the tax liability for the period named.

The Graham Paper Company of St. Louis, was also granted a refund of $26,700.22 for the year 1920. This was for over-assessment of income and profits taxes.

Quebec Leaves Ground Rent Unchanged

The intimations given some time ago by Premier Taschereau that there might be an upward revision in the ground rent which affects timber limit holders have not been fulfilled, doubtless owing to the fact that certain differences among paper producers have been settled amicably, and action along the lines predicted has not been needed to bring the parties into line. An Order-in-Council, just signed by the Lieutenant-Governor, provides that no change in rate of that tax will take place. The last change was made in 1920 for a period of ten years, which according to the Order-in-Council passed then ended on May 1. The rate then had been raised from $5 to $8 per square mile, representing a considerable increase in the rent. The Order-in-Council as passed, however, in the present case is understood to extend the present rate for a period of one year so that instead of a revision taking place in 1940 there may be alterations next year. The reason for the present stand taken by Government is said to be the outgrowth of the existing situation in the lumber industry.

To Submit News Print Study Soon

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., May 21, 1930.—The news print study which the Federal Trade Commission has been making for some months as the result of the McKellar resolution in the Senate has just been placed before the Commission by its economists.

The report has been very slow but has recently been held up because of the serious illness of one of the specialists who has been in charge of the work. The Commission hopes that it will be able to transmit the report to Congress before adjournment this spring.

Swedish Sulphite Prices Trend Lower

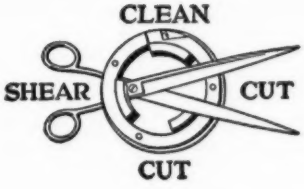
WASHINGTON, D. C., May 14, 1930.—The depression in the Swedish paper trade, accentuated in the United Kingdom by the general business depression, is having its effect on the sulphite market, and particularly the strong sulphite, which is showing a downward trend in prices. The same condition exists in the kraft market, and the manufacturers are becoming more and more convinced that in view of the existing depression no attempt should be made to force sales for the present.

Cotton and Paper Rolls
Super Calenders
Friction Calenders
Embossing Calenders
Hydraulic Presses and Pumps

Successors to the Granger Foundry & Machine Co.

The Textile-Finishing Machinery Company
PROVIDENCE, R. I.

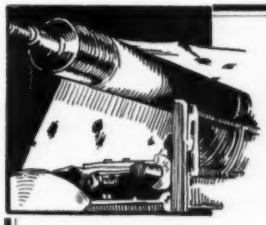
LANGSTON



For clean, square-edged, tightly wound rolls, Langston Slitters are unequalled. The famous Shear-Cut parts the paper sharply—*instead of crushing it.* Ask for catalog giving full details.

SAMUEL M. LANGSTON CO.
Camden, N. J.

SLITTERS



Eliminate Breaks
—in this simple economical way

Breaks are troublesome and are largely due to slime. One mill using Quartz Quality Silicate discovered that a special silicate treatment weekly of the white water dissolved slime and eliminated breaks.

At this mill's machine time rates the loss due to breaks of this nature averaged $2.35 per day or $14.10 per week. The cost of the silicate treatment was $1.40, so that a saving of $12.70 resulted.

In requesting further information please refer to PQ-51-TZ.

Philadelphia Quartz Company
121 S. Third St., Philadelphia
Chicago Sales Office: 205 W. Wacker Drive

3 FEATURES of our "TOP FELTS for BOARD MACHINES"

A Trial Felt for Your Machines Will Prove These Facts.

THE WATERBURY FELT CO., SKANEATELES FALLS, N.Y.

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, May 21, 1930.

Trading in the local paper market was only moderately active during the past week. Demand for the various standard grades of paper continues irregular. Sales forces of the leading paper organizations are fairly optimistic. Prices are holding to formerly quoted levels, in most instances, although there are reports of shading in some branches of the industry.

The outlook for the news print market is considered brighter, in some quarters. Production in the United States and Canada was maintained at 76 per cent of capacity during the past week, according to information gathered by the News Print Service Bureau. Shipments proceeded at 76 per cent of rating, a slight improvement over the preceding week.

Demand for the various grades of paper board was fairly persistent, although the price situation remains unsatisfactory. The fine paper market is exhibiting a strong undertone, with prices steady to firm. The coarse paper market continues spotty. Kraft wrapping paper is in light request. Competition for desirable orders is keen and prices are easy.

Mechanical Pulp

Steadiness prevails in the ground wood market although business is rather quiet at present. Consumption during the first quarter of the year was 2 per cent greater than in the corresponding period of 1929. Production was 4 per cent greater than a year ago. Offerings are sufficient to take care of current needs. Prices are generally holding to schedule.

Chemical Pulp

Conditions in the local chemical pulp market are practically unchanged. Contract shipments of both domestic and imported grades are going forward to the mills in seasonal volume. Inquiries for future needs are fairly numerous. Prices are generally holding to the recently revised levels and there is little talk of further concessions around at present.

Old Rope and Bagging

The old rope market continues rather quiet. There is only a moderate request for No. 1 domestic old manila and foreign old manila. Mixed rope is moving in fairly satisfactory volume. Old rope prices are holding up to schedule, in most instances. The bagging market is displaying a steady trend. Both scrap and gunny bagging are in good demand for the time of year.

Rags

Paper mill interest in the domestic rag market is rather restricted. While linen cuttings are moving into consumption in satisfactory volume, cotton cuttings are only in light request. Roofing rags continue quiet. Mixed rags are easy. The foreign rag market is dull with offerings ample for immediate requirements. No radical price changes have been reported.

Waste Paper

The feature of the paper stock market is the continued strength of the higher grades. Hard white envelope cuttings are particularly active, and, as offerings are limited, prices are firm. Soft white shavings are also in excellent request. The paper board mills are not displaying much interest in the lower grades of waste paper at present and prices of the various grades are easy.

Twine

Most of the business transacted in the local twine market during the past week was along routine lines. Supplies are moving into consumption in normal volume for the season. The twine industry is considered in fairly satisfactory condition for the time of year, in some quarters. Prices are generally holding to previously quoted levels.

May Start Work in Alaska Mill by 1931

PORTLAND, Ore., May 17, 1930.—News dispatches in Pacific Coast papers continue to evince interest in the proposed development of news print and pulp mill projects in southeastern Alaska by Cameron-Chandler interests and Zellerbach corporation. It is understood that these two different projects would total an investment of about $15,000,000 each and that each group would individually carry out financing and operation entirely separate.

Current report carries the idea that at least one of these projects may get under way by the spring of 1931 depending on the condition of the industry. Application for final water power licenses for both groups are to be filed with the Federal Power Commission next month and it is expected that official sanction will be granted in July or August. It is understood that a report of surveys which have been made in the territory over a period of three years will accompany the application in detail.

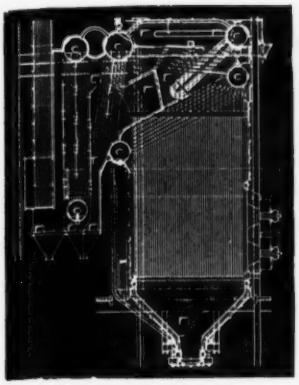
The Cameron-Chandler interests have timber allotments of some 5,000,000,000 feet board measure near Juneau and have had surveys made of water power sites at Long Lake, Crater Lake and Dorothy Lake representing a total of 50,000 hp. It has also been reported that consideration is being given to a mill site at Thane, Alaska, now owned by the Alaska Gold Mining Company.

Zellerbach interests center around Ketchican, some 200 miles south of Juneau.

New York Mills To Get Russian Pulpwood

GLENS FALLS, N. Y., May 19, 1930.—A number of large shipments of pulpwood for the mills of the International Paper Company are destined to pass through this city late this month to be used in the mills at South Glens Falls, Corinth and Fort Edward. It was announced that about 9,000 tons will be shipped to the terminal at Albany by ocean vessels from Nova Scotia and later transferred to freight cars to continue the final journey. The movement is regarded as the forerunner of large shipments of pulp wood through the Port of Albany annually in view of the fact that the company has contracted with Russian interests for immense quantities of the product.

It was learned this week that the total yearly shipments being planned from Russia will amount to over 400,000 tons which is far in excess of any previous cargoes received by the company over the Hudson River. The movement will start early in June when the pulpwood will be placed aboard ships in the port of Archangel for transportation to this country. The first of the shipments is scheduled to reach this country early in July and it is said that it may be necessary to lighten the vessels at Newburgh or Poughkeepsie if it is found difficult to navigate the Hudson to Albany.



BADENHAUSEN STEAM GENERATING UNITS

installed in some of the largest pulp and paper mills in the United States and Canada

MAXIMUM STEAM
AT
HIGHEST EFFICIENCY
WITH
LEAST CAPITAL INVESTMENT and OPERATING COSTS

Result:—Enormous savings in cost of pulp and paper produced.

BADENHAUSEN CORPORATION
General Offices and Works
CORNWELLS HEIGHTS (PHILA.), PA.

LINDSAY SPIRAL WEAVE FOURDRINIER WIRES

prevent grooving of Seams on machines not equipped with oscillating Suction Boxes. This lengthens the life of wires and increases their production.

THE LINDSAY WIRE WEAVING CO.

14025 Aspinwall Ave.
CLEVELAND, OHIO

1864 **1930**

"EXCELSIOR" FELTS

for every grade of

PULP AND PAPER

We continue to maintain at the top the quality of Excelsior Felts, as we have done since we, as pioneers, made the first endless paper machine felts manufactured in America.

Seamless felts for fast running.
Satin Style felts for finish.
Special felts to meet every condition.
Send us your felt problems.

KNOX WOOLEN COMPANY
CAMDEN, MAINE

SOLD BY

BULKLEY, DUNTON & COMPANY

75-77 Duane St., N. Y., and direct

Union Screen Plate Company

Fitchburg, Mass., U. S. A. Lennoxville, P. Q., Canada

UNION BRONZE

SCREEN PLATES FOR FLAT SCREENS
6 SLOTS—5 SLOTS—4½ SLOTS—4 SLOTS—PER INCH

Old Plates Reclosed and Re-cut to Accurate Gauge
Rolled Phosphor Bronze and Copper Plates for Rotary Screens

Sole Manufacturers of the Union Witham Screen Plate Vat and Fastener

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, May 21, 1930.

BLANC FIXE.—Trading in the blanc fixe market was fairly active. Both the pulp and the powder are moving into consumption in good volume. The pulp is still quoted at from $42.50 to $45.00 per ton, in bulk, while the powder is selling at from 3¼ cents to 4½ cents per pound, in barrels, at works.

BLEACHING POWDER.—The bleaching powder market is practically unchanged. Contract shipments are going forward to the mills in seasonal volume. Prices are generally holding to previously quoted levels. Bleaching powder is quoted at from $2.00 to $2.30 per 100 pounds, in drums, at works.

CASEIN.—Conditions in the casein market are fairly satisfactory. Domestic standard ground is quoted at 14 cents and finely ground at 15½ cents per pound. Argentine standard ground is selling at 14 cents per pound and finely ground at 15½ cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—Supplies of caustic soda are moving to consumption at a steady pace. Prices are holding to schedule without difficulty. Solid caustic soda is quoted at from $2.90 to $2.95, while the flake and the ground are selling at from $3.30 to $3.35 per 100 pounds, in large drums, at works.

CHINA CLAY.—Steadiness prevails in the china clay market. The contract movement is well up to average. Prices remain unchanged. Imported china clay is still quoted at from $15 to $25 per ton, ship side, while domestic paper making clay is selling at from $8 to $13 per ton, at mine.

CHLORINE.—Some improvement was noticed in the chlorine market. Contract shipments are proceeding in a satisfactory manner. Prices are generally holding to previously quoted levels. Chlorine is quoted at $2.50 per 100 pounds, in tanks, or multi-unit cars, in ton lots, or over, at works.

ROSIN.—The rosin market made a slight recovery. Prices are somewhat firmer. The grades of gum rosin used in the paper mills are quoted at from $7.50 to $7.55 per 280 pounds, in barrels, on dock. Wood rosin is selling at from $6.65 to $6.70 per 280 pounds, in barrels, on dock.

SALT CAKE.—Demand for salt cake has quieted down although the market is exhibiting a strong undertone. Offerings are not excessive and prices are generally holding to schedule. Salt cake is quoted at from $22 to $25 per ton, while chrome salt cake is selling at from $20 to $21 per ton, in bulk, at works.

SODA ASH.—The soda ash market was moderately active during the past week. Production is being maintained in sufficient volume to take care of current requirements. Prices are steady. Contract quotations on soda ash, in car lots, at works, are as follows: in bags, $1.32½, and in barrels, $1.55.

STARCH.—Most of the business transacted in the starch market was along routine lines. Supplies continue to move to the paper mills in normal volume for the time of year. Prices are holding to schedule. Special paper making starch is quoted at $3.72, in bags, and at $3.99 per 100 pounds, in barrels.

SULPHATE OF ALUMINA.—The sulphate of alumina market is in a sound position. Supplies are moving into consumption at a steady pace. Prices are holding to formerly quoted levels. Commercial grades are quoted at from $1.40 to $1.55, and iron free at from $1.90 to $2.05 per 100 pounds, in barrels, at works.

SULPHUR.—Business in the sulphur market is fairly satisfactory. Sulphur is quoted at $18 per ton, at mine, on orders of 1,000 tons, or over, on yearly contracts, and at $20 per ton for any smaller quantity over the same period. On spot and near by car loads, the quotation is $21 per ton.

TALC.—No radical changes were reported in the talc market. The contract movement is normal for the season. Prices remain unchanged. Domestic talc is quoted at from $16 to $18 per ton, in bulk, at eastern mines, while imported talc is selling at from $18 to $20 per ton, in bags, ship side.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@53.25
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub sized	10.00	@15.00
Engine sized	8.00	@11.00
Book, Cased—		
S. & S. C.	6.00	@ 7.50
M. F.	5.75	@ 7.00
Coated and Enamel	7.50	@12.00
Lithograph	7.50	@12.00
Tissues—Per Ream—		
White No. 1	.75	@ 1.00
Anti-Tarnish	1.35	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.75	@ .80
Kraft	1.00	@ 1.10
Manila	.75	@ .80
Kraft—		
No. 1 Domestic	6.00	@ 6.50
No. 2 Domestic	3.50	@ 5.00
Southern	3.00	@ 4.50
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
Screenings	3.00	@ 3.25
Card Middles	4.00	@ 5.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

(Delivered New York)

News, per ton—		
Rolls, contract	62.00	@ —
Rolls, spot	62.00	@ —
Sheets	67.00	@ —
Side Runs	47.00	@52.00
Boards—per ton—		
News	37.50	@ —
Straw	50.00	@ —
Chip	35.00	@ —
Binders' Boards	65.00	@70.00
Wood Pulp	90.00	@95.00
65 Test Jute Liner	45.00	@47.50
85 Test Jute Liner	50.00	@55.00
Sgl. Mla. Ll. Chip	47.50	@50.00

Mechanical Pulp

(On Dock)

No. 1 Imported—		
Moist	28.00	@30.00
Dry	30.00	@32.00

(F. o. b. Mill)

No. 1 Domestic	26.00	@30.00
Screenings	10.00	@15.00

Chemical Pulp

(On Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.25	@ 4.25
Easy Bleaching	2.75	@ 2.90
No. 1 strong unbleached	2.50	@ 2.65
Mitscherlich unbleached	2.50	@ 2.85
No. 2 strong unbleached	2.35	@ 2.50
No. 1 Kraft	2.00	@ 2.20
No. 2 Kraft	1.90	@ 2.00
Sulphate—		
Bleached	3.40	@ 3.85

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.00	@ 4.75
Easy Bleaching		
Sulphite	2.55	@ 2.85
News Sulphite	2.35	@ 2.60
Mitscherlich	3.00	@ 3.25
Kraft (Domestic)	2.10	@ 3.30
Soda Bleached	2.90	@ 3.20
Coarse	.75	@ .95
Refined	1.65	@ 1.85

Domestic Rags

New Rags

(Prices to Mill f. o. b N. Y.)

Shirt Cuttings—		
New White, No. 1	9.25	@ 9.75
New White, No. 2	7.00	@ 7.50
Silesias No. 1	7.50	@ 8.00
New Unbleached	10.50	@11.00
New Blue Prints	5.25	@ 5.50
New Soft Blacks	5.25	@ 5.75
Blue Overall	7.25	@ 7.75
Washables	4.75	@ 5.25
Fancy	5.50	@ 6.00
Mixed Khaki Cuttings	4.75	@ 5.25
Pink Corset Cuttings	8.00	@ 8.50
O D. Khaki Cuttings	5.15	@ 5.75
Men's Corduroy	3.75	@ 4.25
New Mixed Blacks	3.50	@ 3.75

Old Rags

White, No. 1—		
Repacked	5.50	@ 6.00
Miscellaneous	4.50	@ 5.00
White, No. 2—		
Repacked	3.00	@ 3.50
Miscellaneous	2.50	@ 2.75
St. Soiled, White	2.00	@ 2.15
Thirds and Blues—		
Repacked	2.25	@ 2.50
Miscellaneous	1.75	@ 2.00
Black Stockings	3.25	@ 3.75
Roofing Rags—		
Cloth Strippings	1.70	@ 1.80
No. 1	1.70	@ 1.80
No. 2	1.50	@ 1.60
No. 3	1.30	@ 1.40
No. 4	1.25	@ 1.35
No. 5A	.90	@ 1.05

Foreign Rags

New Rags

New Dark Cuttings	2.50	@ 3.00
New Mixed Cuttings	2.75	@ 3.25
New Light Silesias	7.00	@ 7.50
Light Flannelettes	7.50	@ 8.00
Unbleached Cuttings	10.00	@11.00
New White Cuttings	10.00	@10.50
New Light Oxfords	7.00	@ 7.50
New Light Prints	5.50	@ 6.50

Old Rags

No. 1 White Linens	7.25	@ 8.00
No. 2 White Linens	5.75	@ 6.75
No. 3 White Linens	4.75	@ 5.25
No. 4 White Linens	3.00	@ 3.50
No. 1 White Cotton	5.50	@ 6.50
No. 2 White Cotton	2.75	@ 3.75
No. 3 White Cotton	3.00	@ 4.00
No. 4 White Cotton	1.95	@ 2.15
Extra Light Prints	1.95	@ 2.15
Ord. Light Prints	2.25	@ 2.50
Med. Light Prints	1.95	@ 2.10
Dutch Blue Cottons	2.15	@ 2.30
French Blue Linens	2.65	@ 2.75
German Blue Linens	2.30	@ 2.50
German Blue Cottons	2.00	@ 2.10
Checks and Blues	1.85	@ 2.00
Lindsay Garments	1.85	@ 1.95
Dark Cottons	1.45	@ 1.50
Old Shopperies	1.40	@ 1.45
New Shopperies	1.35	@ 1.40
French Blues	2.00	@ 2.10

Old Rope and Bagging

(Prices to Mill f. o.b. N. Y.)

Gunny No. 1—		
Foreign	1.60	@ 1.70
Domestic	1.65	@ 1.75
Wool Tares, light	1.60	@ 1.65
Wool Tares, Heavy	1.60	@ 1.70
Bright Bagging	1.60	@ 1.70
Small Mixed Rope	1.25	@ 1.40
Manila Rope—		
Foreign	3.85	@ 4.15
Domestic	4.25	@ 4.50
New Burlap Cut	2.75	@ 3.00
Hessian Jute Threads—		
Foreign	3.50	@ 4.00
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, white, No. 1	3.00	@ 3.25
Hard, white, No. 2	2.40	@ 2.55
Soft, white, No. 1	2.65	@ 2.75
White envelope cuttings	2.90	@ 3.10
Flat Stock—		
Stitchless	1.45	@ 1.55
Overissue Mag.	1.45	@ 1.56
Solid Flat Book	1.40	@ 1.50
Crumpled No. 1	1.00	@ 1.10
Solid Book Ledger	2.00	@ 2.10
Ledger Stock	1.40	@ 1.50
New B. B. Chips	.35	@ .45
Manilas—		
New Env. Cut.	2.40	@ 2.60
New Cuttings	1.50	@ 1.75
Extra No. 1 old	1.25	@ 1.35
Print	.60	@ .65
Bogus Wrapper	.60	@ .65
Container	.40	@ .50
Old Kraft Machine—		
Compressed bales.	1.65	@ 1.75
News—		
No. 1 White News	1.65	@ 1.75
Strictly Overissue.	.55	@ .65
Strictly Folded	.45	@ .55
No. 1 Mixed Paper	.25	@ .30
Common Paper	.15	@ .20

LOCKWOOD'S DIRECTORY

OF THE PAPER AND ALLIED TRADES

1930 EDITION

CORRECTED UP-TO-DATE

CONTENTS

Entire contents classified under separate headings for the United States and Canada, alphabetically and geographically arranged by states.

City Addresses of Mills and Mill Supply Houses
Classified List of Paper Mill Products
Classified List of Pulp Mill Products
Coated Paper Manufacturers
Envelope Manufacturers
Glazed and Coated Paper Manufacturers
Idle Mills
Mill Officials
Pad Manufacturers
Paper Merchants
Paper Stock and Rag Dealers
Paper Bag Manufacturers
Paper Box Manufacturers
Paper, Wood Pulp and Chemical Fiber Mills of the United States, Canada, Cuba, Mexico and South America
Paper Specialties Manufacturers
Papeterie Manufacturers
Prepared Roofing Manufacturers
Rags and Paper Stock Consumed by the Paper Mills
Stationers in United States, Porto Rico, Canada, Cuba, Hawaiian Islands and the Philippine Islands
Statistical Table of Mills
Tablet Manufacturers
Tag Manufacturers
Toilet Paper Manufacturers
Trade Associations
Twine Manufacturers
Vegetable Parchment Manufacturers
Wall Paper Printers
Water Marks and Brands
Waxed Paper Manufacturers

1,000 PAGES
***of* USEFUL INFORMATION**

Traveler's Special Pocket Edition

bound in a flexible cover for use of traveling men, comprising the Paper and Pulp Mills, Coating Mills and the Mill Officials. Price $7.50, including delivery charges. ($7.00 cash with order).

Published by
LOCKWOOD TRADE JOURNAL CO.
10 East 39th Street
New York, N. Y., U.S.A.

ADOLPHE HURST & CO., Inc.

420 Lexington Avenue New York

announce enlarged facilities of their

CASEIN

Department

under the management of
Mr. William Rocamora

ARGENTINE CASEIN: "HALLEY" brand. Sole agency for the United States and Canada for Duprat Hnos, successors to Melano & Pettigiani, Buenos Aires.

FRENCH CASEIN: Prime Lactic and Rennet. A1 standardized quality only, ground and unground. Sole selling agency for Lucien Poirier, Paris.

CALIFORNIA CASEIN: Lactic and sulphuric, ground and unground, of standardized uniform quality.
All shipments guaranteed as to uniformity of quality.
Prices for shipment and from New York stock.

APPLY FOR TERMS AND SAMPLES

Wire us your inquiries collect. Direct private wires via "Postal Telegraph" and "Commercial Cable."

"YOUR PAPER IS MADE IN YOUR BEATERS"

Dilts

MACHINE WORKS Inc. FULTON, N.Y.
EXPORT OFFICE - 15 PARK ROW - NEW YORK CITY

"YOUR PAPER IS MADE IN YOUR BEATERS"

DRYING FIDALGO SYSTEMS

FIDALGO DRYING SYSTEMS

FIDALGO Dryers for Shredded Pulp
"DRYAD" Continuous Dryer for Board
PEHRSON ROTARY Dryer for All Materials
CONSISTENCY REGULATORS for All Stock

TECHNICAL ECONOMIST CORP., 122 E. 42 St., N.Y.

MORRIS
CENTRIFUGAL PUMPS

Write for complete information on Non-Clogging Pumps for handling pulp
MORRIS MACHINE WORKS, BALDWINSVILLE, N. Y.

Twines
(F. o. b. Mill)

Cotton—			
No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrappings, 3-6 Ply—			
No. 1	.19	@	.21
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger	.16	@	.17
Fine Tube Yarn—			
5-ply and larger	.21	@	.25
4-ply	.25	@	.29
3-ply	.28	@	.32
Unfinished India—			
Basis	.13	@	.14
Paper Makers Twine			
Balls	.11	@	.12
Box Twine, 2-3 ply	.15	@	.17
Jute Rope	.17	@	.19
Amer. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.16	@	.18
No. 2 Basis	.14	@	.16
Sisal Lath Yarn—			
No. 1	.14	@	.16
No. 2	.12	@	.14
Manila Rope	.22	@	.24

CHICAGO

Paper
(F. o. b. Mill)

Rag Bond	.30	@	.53¼
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¼
No. 2 M. F. Book	.05¼	@	.06¼
No. 1 S.&S.C. Book	.06¾	@	.07¼
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
No. 1 Manila	.04¼	@	.05¾
No. 1 Fibre	.04¾	@	.05¼
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.06¾	@	.06½
Southern Kraft	4.25	@	4.50
No. 2 Kraft	.04	@	.04¼
Wood Tag Boards	.04¼	@	.06¼
Sulphite Sreenings	.03	@	.03¼
Manila Tissue—			
24x36 Sheet	.07	@	.07¼
White Tissue—			
20x30 Sheet	.07¼	@	.07½
(Delivered Central Territory)			
News, per ton—			
Rolls, contract	62.00	@	—
Sheets	67.00	@	—
Boards, per ton—			
Plain Chip	37.50	@	42.50
Solid News	47.50	@	—
Solid News	40.00	@	45.00
Manila Lined Chip	50.00	@	55.00
Container Lined—			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers
(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.35	@	2.40
White Env. Cut-			
No. 1 Soft Shavings	2.10	@	2.15
No. 1 Mixed	.60	@	.70
No. 2 Mixed	.50	@	.60
Ledger & Writings	1.25	@	1.35
Solid Books	1.05	@	1.10
Blanks	1.60	@	1.65
Krafts	1.65	@	1.75
New Kraft Cuts	2.15	@	2.25
Manila Envelope Cuttings	1.75	@	1.80
Ex. No. 1 Manila	1.30	@	1.45
Print Manila	.60	@	.70
Folded News (over-issue	.50	@	.60
Old Newspapers—			
No. 1	.60	@	.65
No. 2	.50	@	.55
Mixed Papers—			
No. 1	.45	@	.50
Roofing Stocks—			
(F. o. b. Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper
(F. o. b. Mill)

Bonds	.05	@	.40
Ledgers	.08	@	.40
Writings—			
Superfine	.12½	@	.18
Extra fine	.18	@	.22
Fine	.17	@	.26
Fine, No. 2	.15	@	.25
Fine, No. 3	.09	@	.20
Book, M. F.	.05	@	.07
Book, S. S. & C.	.05	@	.07½
Book, Coated	.09	@	.16
Coated Lithograph	.07	@	.11
Label	.07	@	.11
No. 1 Jute Manila	.07	@	.09
Manila Sul., No. 1	.04	@	.05½
Manila No. 2	.03	@	.04
No. 2 Kraft	.03½	@	.04
No. 1 Kraft	.05½	@	.06½
Common Bogus	.03½	@	.04
(Delivered Philadelphia)			
News Print Rolls	62.00	@	—
Straw Board	52.50	@	70.00
News Board	37.50	@	38.50
Chip Board	32.50	@	35.00
Wood Pulp Board	85.00	@	95.00
Binder Boards—			
No. 1, per ton	75.00		
No. 2, per ton	70.00		
Carload lots	68.00	@	70.00
Tarred Felts—			
Regular	55.50	@	57.00
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.95	@	2.10
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.25

Domestic Rags (New)
(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.10¼	@	.11
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.07	@	.09
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable, No. 1	.04½	@	.05
Blue Overall	.07½	@	.08
Cottons—According to grades—			
Washable, No. 2	.03	@	—
New Blue	.03	@	.03½
Fancy	.05½	@	.06
New Black Soft	.05	@	.05¾
New Light Seconds	.02½	@	.03
New Dark Seconds	1.85	@	2.00
Khaki Cuttings—			
No. 1 O. D.	.05½	@	.05¾
No. 2 Mixed	.04½	@	.04¾
Corduroy	.03	@	.03½
New Canvas	.08½	@	.09
New Black Mixed	.03¾	@	.04½

Bagging
(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.50	@	1.60
Domestic	1.75	@	—
Manila Rope	3.50	@	4.00
Sisal Rope	1.50	@	—
Mixed Rope	1.10	@	1.25
Scrap Burlaps—			
No. 1	1.50	@	1.60
No. 2	1.10	@	1.20
Wool Tares, heavy	3.00	@	—
Mixed Strings	1.15	@	1.25
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	2.00	@	2.25

Old Papers
(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	2.65	@	2.75
No. 2 Hard White	2.30	@	2.50
No. 1 Soft White	2.25	@	2.50
No. 2 Soft White	1.40	@	1.60
No. 1 Mixed	1.20	@	1.25
No. 2 Mixed	.75	@	.80
Solid Ledger Stock	1.55	@	1.65
Writing Paper	1.15	@	1.25
No. 1 Books, heavy	1.15	@	1.20
No. 2 Books, light	.90	@	1.00
No. 1 New Manila	2.25	@	2.30
No. 1 Old Manila	1.50	@	1.60
Print Manila	.75	@	.80
Container Manila	.50	@	.60
Old Kraft	1.35	@	1.40
Common Paper	.30	@	.40
No. 1 Mixed Paper	.25	@	.30
Straw Board, Chip	.35	@	.40
Binders Board, Chip	.35	@	.45
Overissue News	.45	@	.50
Old Newspaper	.25	@	.30

Domestic Rags (Old)

White No. 1—			
Repacked	4.25	@	4.50
Miscellaneous	3.50	@	3.75
M. G.	7.00		—
Thirds and Blues—			
Repacked	2.00	@	2.25
Miscellaneous	1.60	@	1.80
Black Stockings (Export)	3.90	@	4.25
Roofing Stock—			
Foreign No. 1	1.65	@	1.75
Repacked	.01½	@	.01½
No. 2	1.20	@	1.25
No. 3 (Roofing)	1.10	@	1.20
No. 4	1.00	@	1.15
No. 5A	.75	@	.85
B	.65	@	.75
C	.65	@	.75

BOSTON

Paper
(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.12½
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.06½	@	.20
Superfines	.11	@	.31
Book, Super	.06	@	.09
Book, M. F.	.05½	@	.08½
Book, Coated	.08½	@	.18
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.06¾	@	.06½
No. 2 Kraft	.03½	@	.04½
Common Bogus	.02	@	.02¾
Delivered New England points			
News Print Rolls	61.50	@	—
Straw Boards, rolls	.009		52.50
Straw Board in Sheets, basis 35s to 70s	54.50	@	55.00
Filled News Board	37.50	@	40.00
Chip Board	35.00	@	37.50
Single Manila Lined Chip	47.50	@	52.50
Single White, Patent Coated Newsboard Bender	65.00	@	80.00
Wood Pulp Board	75.00	@	80.00
Binder Boards	70.00	@	75.00
(F. o. b. Mill)			
Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers
(F. o. b. Boston)

Shavings—			
No. 1 Hard White	3.25	@	3.75
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.40	@	2.50
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	—	@	2.25
No. 1 Books, Heavy	1.45	@	—
No. 1 Books, Light	—	@	1.15
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	.90	@	1.00
White Blank News	1.60	@	1.70
Old Kraft	1.40	@	1.50
Print Manila	.75	@	.80
No. 1 Mixed Paper	.20	@	.22½
Overissue News	.40	@	.50
Old Newspapers	.40	@	.45
Box Board, Chip	.45	@	.50
Corrugated Boxes	—	@	.40

Bagging
(F. o. b. Boston)

Gunny No. 1—			
Foreign	1.70	@	—
Manila Rope—			
Foreign	3.25	@	3.50
Domestic	—	@	4.25
Transmission Rope	2.25	@	2.50
Mixed Strings	.90	@	1.00
Jute Wool Strings	.90	@	1.00
Jute Carpet Threads	1.05	@	1.15
Scrap Burlaps	1.25	@	1.40
Scrap Sisal	1.55	@	1.65
Scrap Sisal for shredding	1.75	@	2.00
Wool Tares, heavy	1.60	@	—
New Burlap Cutting	1.75	@	2.00
Australian Wool Pouches	2.50	@	3.00

Domestic Rags (New)
(F. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.08	@	.08½
Silesias No. 1	.06	@	.06¼
New Unbleached	—	@	.09¼
Fancy	.04	@	.04½
Washable	.04	@	.04½
Cottons—According to grades			
Blue Overalls	.06¼	@	.06¾
New Black, soft	.04	@	.04¾
Khaki Cuttings	.04	@	.04¾
O. D. Khaki	.05	@	—
Corduroy	.03	@	.03½
New Canvas	.08	@	.08½

Domestic Rags (Old)
(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	4.75	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Twos and Blues	2.75	@	3.00
Thirds and Blues—			
Repacked	2.25	@	2.50
Miscellaneous	1.75	@	1.90
Black Stockings	—	@	4.00
Roofing Stock—			
No. 1	1.65	@	1.75
No. 2	1.40	@	1.50
No. 3	1.05	@	1.10
No. 4	1.10	@	1.15

Foreign Rags
(F. o. b. Boston

Dark Cottons	1.20	@	1.25
New No. 1 Shirt Cuttings	9.00	@	9.50
Dutch Blues	2.00	@	2.12½
Lace Curtains	4.50	@	4.75
New Checks & Blues	4.25	@	4.60
Old Fustians	1.90	@	2.00
Old Linsey Garments	1.70	@	1.80

TORONTO

Paper
(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¼	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
Book—			
No. 1 M. F. (carloads)	7.50	@	—
No. 2 M. F. (carloads)	7.25	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.00	@	—
No. 2 S. C. (carloads)	7.75	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and Litho	13.25	@	—
No. 2 Coated and Litho	12.25	@	—
No. 3 Coated and Litho	10.00	@	11.50
Coated tinted	14.50	@	—
Wrapping—			
Rag Brown	4.95	@	—
White Wrap	5.25	@	—
"B" Manila	5.00	@	—
No. 1 Manila	5.40	@	—
Fiber	5.40	@	—
Kraft, M. F.	5.90	@	—
White, No. 2	2.00	@	2.25

(Delivered Toronto)

News, per ton—			
Rolls (contract)	61.50	@	62.00
Sheets	67.00	@	—

Pulp
(F. o. b. Mill)

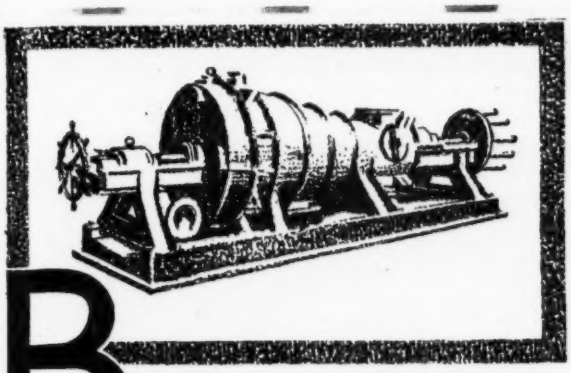
Ground Wood	30.00	@	32.00
Sulphite easy bleaching	60.00	@	—
Sulphite news grade	60.00	@	—
Sulphite, bleached	72.50	@	75.00
Sulphate	60.00	@	—

Old Waste Paper
(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	2.85	@	—
White Blk. News	1.60	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.40	@	—
Light and Crumpled Book Stock	1.25	@	—
Ledgers and Writ- Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.85	@	—
Strictly Folded	.85	@	—
No. 1 Mixed Paper	.65	@	—

Domestic Rags
(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.09¼	@	.10
Fancy Shirt Cuttings	.06	@	.06¼



BOLTON STAINLESS JORDAN KNIVES . . .

Cut replacements — no erosion or sluffing — no discolorization

Bolton Stainless Knives help you to make better, cleaner paper with less time out for replacement of knives. Best for free stock, not as good as bronze for slow stock, but cost less, cut better and edges stay sharp longer than bronze.

Paper Mill Knives for

Washers Beaters
Refiners Jordans
Rotary Sheet Cutters
Trimmers
Flat Bed Cutters

Pulp Mill Knives for

Chippers
Barkers
Hogs
Shredders

JOHN W. BOLTON AND SONS, INC.

LAWRENCE
MASSACHUSETTS

3976

PAPER TRADE JOURNAL

ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-EIGHTH YEAR

Published Every Thursday by the
LOCKWOOD TRADE JOURNAL CO., Inc.

GEO. S. MACDONALD, President: J. BANNINGA, Sec.-Treas.

Executive and Editorial Offices: 10 East 39th Street, New York
Chicago Office: 123 West Madison St.

TABLE OF CONTENTS

Copyright, 1930, by the Lockwood Trade Journal Co., Inc.

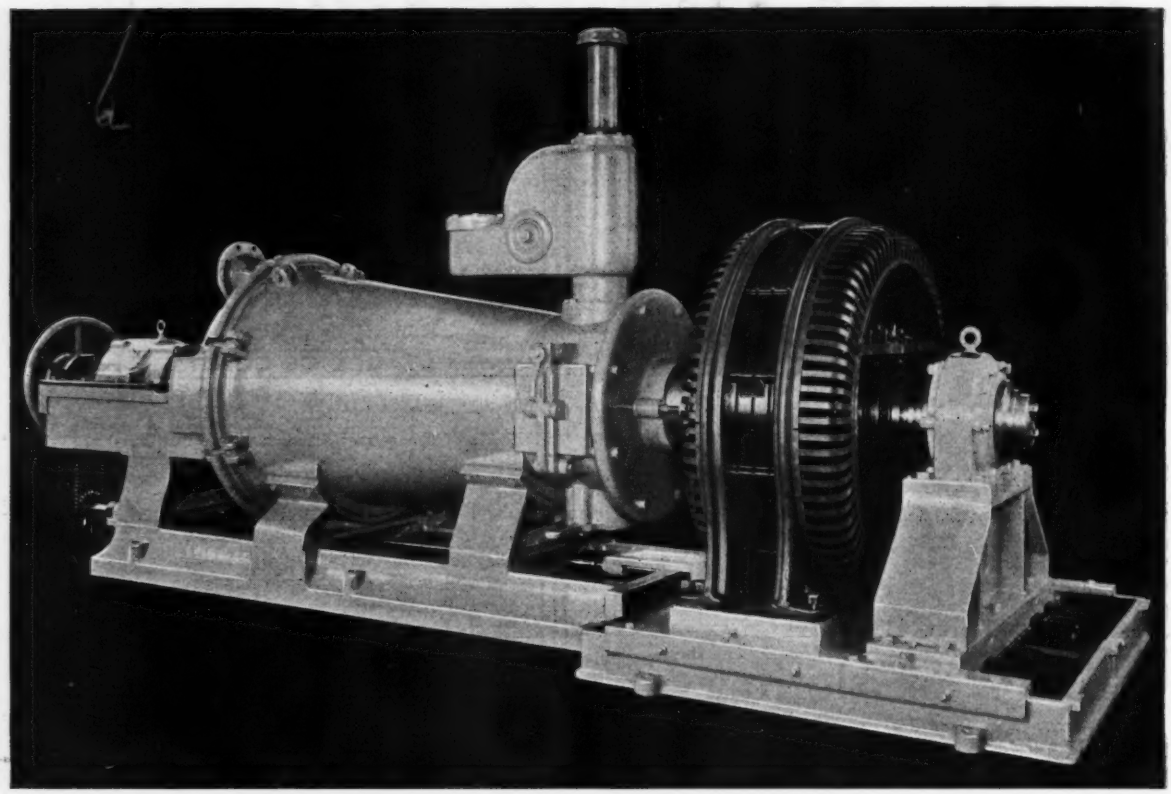
St. Regis Purchases Tacoma Kraft Mill 23
Bryant Paper Co. Starts New Finishing Room .. 23
News Print Manufacturers Confer 24
Big New Paper Project for B. C. 25
Warren Mfg. Co. to Change Name 25
Discuss Reforestation in New York 25
Philadelphia Paper Demand Improves 26
Ontario Manufacturers Fairly Active 28
Safety Conference to be Held at Green Bay 30
Chicago Paper Market Shows Improvement 31
Boston Paper Market Steady 31
New York Trade Jottings 32
Construction News 34
New Companies 36
Tomahawk Kraft Paper Prospering Nicely 36
Boston Paper Trade Happenings 36
Michigan Superintendents Meet 36
Power Plant Section **38**
May Investigate Union Bag 46
Japanese Paper Production 46
W. B. Bullock Discusses New Tariff Bill 46
Paper Expansion on Pacific Coast 46
Paper and Paper Stock Imports 48
New Paper Concern Buys Lumber Tracts 48
Grand Rapids and Detroit Firms Merge 48
Editorial **52**
Stabilizing Work to Cut Waste 53
Brownville Paper Co. Resumes 53
Technical Section
Method of Determining Water Soluble Materials 55
Trimming of Box or Container Board..... 57
Steam Improvements at Standard Paper Mfg. Co. 56
Performance Standards for .009 Corrugated Paper 57
Current Paper Trade Literature 60
Cost Section **65**
News Print Production in April 68
Imports of Paper and Paper Stock 72
New York Market Review **76**
Miscellaneous Markets **78**
Market Quotations **78**

THE PAPER TRADE JOURNAL is indexed in Industrial Arts Index

Want and For Sale Advertisements, 81, 82, 83, 84

The Appleton Close-Coupled Jordan Drive is a more profitable power application

PATENTS APPLIED FOR



MAKING FLOOR SPACE MORE PRODUCTIVE

It is good business to realize the largest possible profit from every foot of floor area. So in selecting a Jordan bear this important fact in mind: the over-all length of the Appleton Close-Coupled Jordan is twenty-five per cent less than the direct connected type with flexible coupling. The flexible coupling has been eliminated. The motor has been moved up close to the plug and mounted directly on the shaft. While this improvement in Jordan design has considerably decreased the over-all length it has also meant a more effective power application—more economical—more efficient.

. THE APPLETON CLOSE - COUPLED JORDAN ENGINE

The Appleton Open-Throat Plug is standard equipment with the Appleton Close-Coupled Jordan

Mills that are speeding up production or changing to finer grades of paper calling for increased refining capacity often find themselves cramped for space in which to install additional Jordans. They will appreciate the advantage of this shorter Jordan. It may save unnecessary remodeling or building. In any mill the Appleton Close-Coupled Jordan will contribute directly to the increased earning power of floor space.

THE APPLETON MACHINE COMPANY, Appleton Wis.